Alignment of Idaho State Standards With Idaho Standards Achievement Test (ISAT)

James Leffler, Chair
Jana Potter
Rebecca Novick
Maureen Carr
Claire Gates
Melinda Leong
Karen Draper
Megh Thapa

Conducted by:
Northwest Regional Educational Laboratory

June 16, 2003

Table of Contents

List of Tables

Alignment of Idaho Standards With Idaho Standards Achievement Test (ISAT) Conducted by Northwest Regional Educational Laboratory

Purpose

To provide an external alignment study to establish the alignments of Idaho state standards with the adopted Idaho Standards Achievement Test's (ISAT) developed by Northwest Evaluation Association.

Methodology

The alignment process used by NWREL was constructed primarily from the work of Norman L. Webb (1997, 1999, 2001, and 2002) as referenced in *Peer Reviewer Guidance For Evaluating Evidence of Final Assessments Under Title I of the Elementary and Secondary Education Act* (US Dept. of Education, 1999*), Research Monograph No. 8, Criteria for Alignment of Expectations and Assessments in Mathematics and Science Education* (Webb, 1997), and in *Research Monograph No. 18, Alignment of Science and Mathematics Standards and Assessments in Four States* (Webb, 1999) as published by the National Institute for Science Education, University of Wisconsin-Madison and the Council of Chief State School Officers. *State Standards and State Assessment Systems: A Guide to Alignment* (2000) by La Marca, Redfield and Winter, also published by the Council of Chief State School Officers was also used for reference.

La Marca, Redfield, and Winter Alignment Model

La Marca et al. (2000) discuss organizing principles for alignment of content match, depth match and emphasis match.

Content Match

"How well does test content match subject area content identified through state academic standards?" (La Marca, 2000) USDOE (1999), as referenced in La Marca et al., refer to content match as indicating that all standards must be assessed, therefore demonstrating the

"comprehensiveness" of the assessment system. They also point out that Webb's "range-of-knowledge" and "categorical congruence" are both indicators of content match in that they are indicators that standards and assessments cover a comparable span of topics and ideas at the categorical and level of detail arenas.

La Marca et al. also recognize the improbability that a single assessment instrument will be able to adequately provide for the breadth of cover needed for an aligned system. They also recognize the possible need for sampling approaches.

Depth Match

"How well do test items match the knowledge and skills specified in the state standards in terms of cognitive complexity?" (La Marca, 2000) Both in the work of La Marca et al. and Webb, one finds a need for depth of knowledge match – do both the standards and the assessments reflect similar requirements for the level of cognitive complexity. Webb refers to this in his criteria "Depth-of-Knowledge Consistency." La Marca et al. mention Webb's work in which he cites a variety of researchers, "…contend that research addressing how students develop knowledge within content areas should be considered in evaluating the cognitive soundness of an assessment system and that this may be revealed in the articulation and assessment of standards across grades and ages. Aligned standards and assessments are complementary in their representation of the underlying structure of knowledge students need to develop and how their instructional experiences should be organized." (2000, page 12)

Emphasis

In alignment, one also needs to examine the degree to which the assessment's relative emphases on topics and processes are reflected in the standards. Webb's criteria refer to this as Balance-of-Representation and is determined with his calculated index in this area.

Webb Alignment Model

(Webb 1999) uses four major criteria: categorical concurrence, depth-of-knowledge consistency, rang-of-knowledge correspondence, and balance of representation.

Alignment Criterion #1– Categorical Concurrence:

(Webb 1999, page 7) states, "The criterion of categorical concurrence between standards and assessment is met if the same or consistent categories of content appear in both …." State standards and assessments. The criterion is judged by examining both the assessments and the standards to determine whether the assessment instruments do in fact include items that measure the content of the standards.

(Webb 1999) assumes that if an assessment instrument contains at least six items measuring the content of a standard, that assessment has attained 'acceptable' categorical concurrence. Six is considered to be the minimum for an assessment to be considered 'acceptable." For further discussion of Webb's rationale on this matter, please refer to page 7 of Webb's *Research Monograph No. 18 – Alignment of Science and Mathematics Standards and Assessments in Four States*, published by the National Institute for Science Education and the Council of Chief State School Officers in 1999.

Alignment Criterion #2 – Depth-of-Knowledge Consistency:

"Depth-of-Knowledge consistency between standards and assessment indicates alignment if what is elicited from students on the assessment is as demanding cognitively as what students are expected to know and do as stated in the standards." (Webb, 1999, page 7) This alignment examines the alignment not only between contents of standards and assessments, but also the complexity of knowledge required by each.

(Webb 1999, page 8) defines an 'acceptable' level of consistency being that "at least 50% of the items corresponding to an objective had to be 'at' or 'above' the level of knowledge of the objective" as a whole. Webb also defines a standard that has between 40% and 50% of its items at or above the depth-of-knowledge of the standard as a whole as having "weakly met" the criteria for Depth-of-Knowledge consistency.

Alignment Criterion #3 – Range-of-Knowledge Correspondence

The third criterion for alignment described by Webb is that of range-of-knowledge or breadth of knowledge. On page 8 of his 1999 monograph, Webb describes this as,

"The range-of-knowledge criterion is used to judge whether a comparable span of knowledge expected of students by a standard is the same as, or corresponds to, the span of knowledge that students need in order to correctly answer the assessment items/activities. The criterion for correspondence between span of knowledge for a standard and the assessment considers the number of objectives within the standards with at least one related assessment item/activity."

To be 'acceptable' according to Webb's work, at least 50% of the objectives for a standard must have at least one related assessment item/activity.

Alignment Criterion #4 – Balance of Representation

Assessment instruments and standards need to be comparable not only in breadth of knowledge (categorical concurrence) and depth of knowledge (depth-of-knowledge consistency) but also in equal distribution of the knowledge. The criterion of Balance of Representation is used to "indicate the extent to which assessment items are evenly distributed across objectives." (Webb, 1999, page 9)

To determine the 'acceptable' level of this criteria, Webb uses an index to judge this distribution. On page 9 of his 1999 research monograph, Webb describes this index as being "computed by considering the difference in the proportion of objectives and the proportion of hits assigned to the objective. An index value of 1 signifies perfect balance and is obtained if the hits (items/assessment) related to a standard are equally distributed among the objectives for the given standards."

The 'acceptable' cut off point for the Balance of Representation criterion is defined by Webb as having an index value of .7 or higher. Index values between .6 and .7 are considered to "weak."

NWREL's Alignment Model

NWREL's alignment study of performance standards and grade level benchmark tests in reading, writing and mathematics addressed four alignment criteria described by Webb (1999). The four major criteria were:

- categorical concurrence
- depth-of-knowledge consistency
- range-of-knowledge correspondence
- balance of representation

Webb's (1999) standards of acceptance for each of the four criteria were adopted for this work, with the one exception noted above under criteria #3 – Range-of-knowledge correspondence.

Although all four criteria were examined within this alignment, La Marca et al. (page 16, 2000) indicates that "Generally speaking, a standard was judged to have an acceptable degree of alignment if six or more items measured the standard (Criteria #1 – Categorical Concurrence in Webb's model) and 50 percent or more of the matching items were at or above the necessary depth of knowledge (Criteria #2 – Depth-of-Knowledge Consistency in Webb's model)." This implies that the first two criteria are stronger in importance than the last two.

For the case of Idaho, several modifications have been made in Webb's process. The most notable is in the area of range-of-knowledge. Those modifications are explained below. Where Webb used mean and standard deviations calculated from the individual scores of scorers, the NWREL used a consensus model, with raters meeting together to discuss and come to consensus on all ratings.

La Marca et al. (page 15, 2000) discusses the third party, external evaluation of alignment process similar to that used by Idaho in contacting NWREL. While they point out the high level of objectivity of the process, they also question whether an external party is capable of detecting the "nuances and intentions embedded within the development of both standards and assessments," and the fact that these are critical to the evaluation process. They further caution that, "unless this information is explicitly shared, the evaluation provided by a third party may be of limited value." In the process used by Idaho and NWREL, the researchers conducting the alignment study examined multiple printed references from Idaho and then met with representatives of the Idaho State Department of Education to discuss these specific points.

Process Description

1. The alignment process was conducted for each area of criteria and for each content area by a minimum of three professional staff with background in instruction, assessment, evaluation, and/or content area expertise (see resumes in Appendix D). Ratings used in calculating alignment for each of the four criteria described above were determined through consensus.

2. NWREL staff examined Idaho state standards and benchmark materials.

3. NWREL staff and the Idaho state Directors of Title I and Assessment met to review state standards, benchmarks and the proposed process. The leveling and item matching to standards and benchmarks was completed for a sampling of items for both reading and mathematics.

4. Through consensus, a depth-of-knowledge level was determined for each performance standard. That level represented the highest level of knowledge expected for that standard. For more detailed descriptions of Depth-of-Knowledge level definitions see Appendix B.

5. Raters then examined each assessment item/activity and marked it as a 'hit' for each correlating standard addressed by that item/activity. An individual assessment item/activity was allowed as a 'hit' on up to three standards.

6. Raters determined the depth-of-knowledge level of each individual assessment item/activity. Item depth-of-knowledge level was then compared to the depth-of-knowledge level of the performance standard as a whole (as determined in step one above). Each item was then classified as being "at," "above," or 'below" the level of the performance standard as a whole.

7. The percentage of objectives within a standard, being assessed by one or more assessment item/activity was then calculated.

8. A balance-of-representation index was then calculated for each standard. The balance-of-representation examines the extent to which assessment items/activities are evenly distributed across a standard.

SECTION I

Summary Findings

Note: This alignment study should not be interpreted as an evaluation of the ISAT as developed with Northwest Evaluation Association. It is a study of the alignment, based on four dimensions, between the ISAT and the Idaho Standards, utilizing a nationally recognized model to examine alignment.

Table 1.0 – Alignment Findings Summary table provides an overview of the four alignment criteria findings for each of the five assessments instruments. This summary allows comparison across grade levels, within each of the three content areas. For more detailed information, see also Tables 2.0 – 2.5 (Reading), Tables 3.0 – 3.5 (Mathematics), and Tables 4.0 – 4.5 (Language Arts) in Sections 2-4 of this report.

Appendix B contains an Explanation of Columnar Data in Tables 2.0 through 4.5.

Categorical Concurrence

Categorical concurrence answers the question, **"Does the test instrument assess the state standards**?" Specifically, are there a minimum of 6 items/tasks for each state standard.

As a preliminary comment, it must be stated that the 'on grade – on-level' tests are at a disadvantage with the Categorical Concurrence by the fact that they are relatively short instruments. When it was appropriate, the alignment process did match an assessment task/item with more than one standard and/or objective. The limited number of items would affect the criterion of Categorical Concurrence and Range of Knowledge most directly. On the other hand, the limited number of items may in fact inflate the results in the area of Depth of Knowledge – it is possible to meet the criterion at the 100% level for Depth of Knowledge with only one task/item addressing a standard, as long as that one item is 'at or above' the Depth of Knowledge Level of the standard/objective (as is the case of Math 302.3).

The second column of detailed tables (2.1 – 2.5, 3.1 – 3.5, 4.1 – 4.5), "Categorical Concurrence % of Standards Acceptable" reports the percent of standards that have met the criterion of having six items per standard.

In reading, the range is from 40% to 60%, with all three of the Spring 2003 instruments being at 40%. This is low, indicating that over half of the standards at each grade level are either not assessed, or are not accessed by an acceptable number of items.

In mathematics, the range is from 32% to 83% with the strongest instrument begin grade 4, Spring 2003.

In language arts, the range is from 16.7% overall in grade 10 – Spring 2003 to 67% overall in grade 4. This is low in grades 8 and all versions of the 10th grade instrument, with less than half of the state standards being assessed on the current instruments. With regard to the three versions (Spring 2002, Fall 2002, and Spring 2003) of the grade 10 assessment, both of the 2002 versions met the criterion for Categorical Concurrence to a higher degree than did the Spring 2003 version.

Depth of Knowledge

Depth of Knowledge answers the question: **"Does the assessment instrument measure the state standards at or above the level cognitive level at which the standards are written?"** Specifically, are at least 50% of the assessment items/tasks at or above the cognitive level of the standard as a whole.

Summary information on Depth of Knowledge, reported by individual test instruments is reported in Tables 1.1 through 1.2. The tables show that with the series of Spring 2003 instruments, at grades 4, 8, and 10, items are written at levels 1 and 2, with a few level 3 items in the previous versions of the tenth grade instruments. No instruments had any items written at level four, as would be expected.

The majority of the items (74.1%) on the reading instruments were written at level 2, while 47% of the standards are written at level 2, 53% at level 3, and no standards were written at levels 1 or 4.

The majority of the items (69.6% on the combined Spring 2003 instruments) on the mathematics instruments were written at level 2, as were the majority of the Idaho standards.

The majority of the items (87.5%) on the language instruments were written at level 1, while 0% of the standards are written at level 1, 6% at level 2, 75% at level 3, and 19% at level 4.

Data for Depth of Knowledge is presented in the third and fourth columns in the summary Table 1.3. The third column calculations represent the results with looking at entire standards. The fourth column calculations represent the results with looking at objectives (Idaho refers to these as Content Knowledge and Skills in its standards documents).

The results from the two different calculations both indicate areas of weakness. The latter may be more helpful in identifying specific topics/objectives to be addressed by new items.

Depth of Knowledge levels were difficult to assign with some Idaho standards/objectives due to the nature of the verbs used in them. Their ultimate Depth of Knowledge level would be dependent on the interpretation of the classroom teacher and what activities were used for their instruction and assessment. In these cases, the samples were used to help determine a 'reasonable' level assignment.

The Depth of Knowledge score is affected by the fact that the ISAT is a multiple-choice, selected response based instrument. Standards and objectives developed at levels 1 and 2 are more readily assessed by multiple-choice test formats, though it is possible in some cases to get to level 3. The State of Idaho does have standards and objectives written at all levels, 1-4.

In reading the range is from 40% at grades 4 and 8 to 20% on all of the Grade 10 versions. The large discrepancy (40% for Standards and 17% for Objectives) between the Depth of Knowledge score by Standards and by Objectives is due to the fact that a large number of Objectives have few if any items aligned to them.

In Mathematics the range is from 26% (grade 8, Spring 2003) to 43% (grade 4, Spring 2003).

In Language Arts the overall Depth of Knowledge is at 0% for all grades/all instruments.

Range of Knowledge

Range of Knowledge answers the question: **"Does the assessment instrument assess each standard fully**?" Specifically, are at least 50% of the objectives under each standard assessed by at least one assessment item/task?

Webb discusses the fact that Range of Knowledge correspondence is more difficult to obtain when content expectations are "partitioned among a greater number of standards and a large number of objectives." (1999, page 8) In Idaho, mathematics has the largest number of both standards and objectives.

In reading, the range of scores for Range of Knowledge is from 80% (grade 8, Spring 2003 and grade 10, Fall 2002) to 40% (grade 10, Spring 2003 and grade 10, Spring 2002).

In mathematics, the range of scores for Range of Knowledge is from 75% (grade 4, Spring 2002) to 36% (grade 8, Spring 2002).

In Language Arts, the range of scores for Range of Knowledge is from 100 % (grade 4, Spring 2003) to 43% overall (grade 8, Spring 2003).

Balance of Representation

Balance of Representation answers the question: **"Is the assessment instrument balanced in assessing all standards equally?"**

Balance of Representation is most strongly affected in two cases 1) when you have a number of standards with FEW or NO items to assess them, and 2) when you have a few standards that have a proportionately high number of items that assess them. Both cases are present in the ISAT. A Balance of Representation index of +.7 or higher is considered "acceptable"; a Balance of Representation index of +.6 to +.7 is considered "weak"; and a Balance of Representation index below +.7 is considered "not acceptable."

In reading, the range of scores is from +.3 (Fall 2002, grade 10) to -.1 (Spring 2003, grade 10). All three of the Spring 2003 instruments in reading have an index below .7 and are therefore not acceptable.

In mathematics, the range of scores is from 0 (Spring 2003, grade 4) to -6.5 (Spring 2002, grade 10.

In language arts, the range of scores is from +.6 (Spring 2003, grade 4) to -.5 (Spring 2003, grade 10).

No instruments, in any content area meet the criteria for Balance of Representation, most likely due to the small number of items on each of the assessment instruments.

Summary Tables

Table 1.0
Alignment Findings Summary

Assessment	Categorical Concurrence % of Standards Acceptable	Depth of Knowledge % of Standards Acceptable	Depth of Knowledge % of Objectives Acceptable	Range of Knowledge % Acceptable	Balance of Representation Acceptable
READING					
Grade 4, Spring 2003	**40%** **(NWEA 40%)**	**40%**	**50%**	**60%**	**.1**
Grade 8, Spring 2003	**40%** **(NWEA 40%)**	**40%**	**17%**	**80%**	**.1**
Grade 10, Spring 2002	**60%**	**20%**	**23%**	**40%**	**.2**
Grade 10, Fall 2002	**60%**	**20%**	**27%**	**80%**	**.3**
Grade 10, Spring 2003	**40%** **(NWEA 40)**	**20%**	**23%**	**40%**	**-.1**
MATHEMATICS					
Grade 4, Spring 2003	**21%** **(NWEA 16%)**	**83%**	**43%**	**75%**	**0**
Grade 8, Spring 2003	**8%** **(NWEA 12%)**	**32%** **(6% WEAK)**	**26%**	**36%**	**-1.8**
Grade 10, Spring 2002	**3.7%**	**44.4%**	**31.8%**	**51.9%**	**-6.5**

Grade 10, Fall 2002	**7.4%**	**44.4%**	**37.7%**	**51.6%**	**-3.0**
Grade 10, Spring 2003	**7.4%** **(NWEA 3.7%)**	**48.1%**	**42.6%**	**63.0%**	**-3.0**
LANGUAGE ARTS					
Grade 4, Spring 2003	**67%** **(NWEA 67%)**	**0%**	**0%**	**100%**	**.6**
Grade 8, Spring 2003	**29%** **(NWEA 29%)**	**0%**	**0%**	**43%**	**0**
Grade 10, Spring 2002	**33%**	**0%**	**0%**	**67%**	**.2**
Grade 10, Fall 2002	**33%**	**0%**	**0%**	**50%**	**.4**
Grade 10, Spring 2003	**16.7%** **(NWEA 33%)**	**0%**	**0%**	**50%**	**-.5**

Table 1.1
Depth of Knowledge Summary By Instrument
Reading

	Depth of Knowledge Level – # and Percent of Items at Each Level			
Instrument	**Level 1***	**Level 2***	**Level 3***	**Level 4***
Grade 4	27 / 26%	77 / **74%**	0	0
Standards	0%	**80%**	20%	0
Grade 8	26 / 31%	57 / **69%**	0	0
Standards	0%	40%	**60%**	0
Grade 10 – Spring 2003	23 / 21%	84 / **79%**	0	0
Standards	0%	20%	**80%**	0
All Spring 2003 Inst.	76 / 25.9%	218 / **74.1%**	0	0
Standards	0%	46.7%	**53.3%**	0
Grade 10 – Spring 2002	4 / 3%	115 / **93%**	5 / 4%	0
Standards	0%	20%	**80%**	
Grade 10 – Fall 2002	8 / 7%	106 / **88%**	7 / 6%	0
Standards	0%	20%	**80%**	

* First two numbers represent the number and percent of items on the instrument at each D of K level. Bottom number represents the % of state standards written at each D of K level. BOLD indicates the location of the majority.

Table 1.2
Depth of Knowledge Summary By Instrument
Mathematics

	Depth of Knowledge Level – # and Percent of Items at Each Level			
Instrument	**Level 1***	**Level 2***	**Level 3***	**Level 4***
Grade 4	18 / 39%	28 / **61%**	0	0
Standards	5.3%	**84.2%**	10.5%	0
Grade 8	17 / 39%	27 / **61%**	0	0
Standards	0	**86.2%**	13.8%	0
Grade 10 – Spring 2003	10 / 16.4%	51 / **83.6%**	0 / 0	0 / 0
Standards	3.7%	85.2%	11.1%	0
All Spring 2003 Inst.	30.4%	**69.6%**	0%	0%
Grade 10 – Spring 2002	13 / 23.2%	**43 / 76.8%**	0 / 0	0 / 0
Standards	3.7%	**85.2%**	11.1%	0
Grade 10 – Fall 2002	13 / 23.2	**30 / 62.5**	0 / 0	0 / 0
Standards	3.7%	**85.2%**	11.1%	0

* First two numbers represent the number and percent of items on the instrument at each D of K level. Bottom number represents the % of state standards written at each D of K level.

Table 1.3
Depth of Knowledge Summary By Instrument
Language Arts

	Depth of Knowledge Level – # and Percent of Items at Each Level			
Instrument	**Level 1***	**Level 2***	**Level 3***	**Level 4***
Grade 4	39 / **91%**	4 / 9%	0	0
Standards	0	33.3%	33.3%	33.3%
Grade 8	40 / **93%**	3 / 7%	0	0
Standards	0	0	**71.4%**	28.6%
Grade 10 – Spring 2003	47 / **81%**	11 / 19%	0	0
Standards	0	0	**100%**	0
All Spring 2003 Inst.	126 / **87.5%**	18 / 12.5%	0	0
Standards	0	6.25%	75%	18.75%
Grade 10 – Spring 2002	42 / **68%**	20 / 32%	0	0
Standards	0	0	**100%**	0
Grade 10 – Fall 2002	51 / **81%**	12 / 19%	0	0
Standards	0	0	**100%**	0

* First two numbers represent the number and percent of items on the instrument at each D of K level. Bottom number represents the % of state standards written at each D of K level.

Summary Conclusions

Table 1.4
Summary Comparison of Instruments

Content Area	Instrument	Summary Rating *
Reading	**Grade 4, Spring 2003**	**46.7**
	Grade 8, Spring 2003	**53.3**
	Grade 10, Spring 2003	**33.3**
	Grade 10, Spring 2002	40
	Grade 10, Fall 2002	53.3
Mathematics	**Grade 4, Spring 2003**	**38.6**
	Grade 8, Spring 2003	**25.3**
	Grade 10, Spring 2003	**16.0**
	Grade 10, Spring 2002	33.3
	Grade 10, Fall 2002	33.3
Language Arts	**Grade 4, Spring 2003**	**55.6**
	Grade 8, Spring 2003	**23**
	Grade 10, Spring 2003	**22.2**
	Grade 10, Spring 2002	33.3
	Grade 10, Fall 2002	27.8

* Summary rating: The Score number is an attempt to summarize the findings across the three criteria. The total possible is the number of standards multiplied by three (the number of criteria –categorical concurrence, depth of knowledge, and range of knowledge). That ratio is then converted to a percentage to allow comparison across grades – 100 would be a perfect score.

.

Table 1.5
Balance of Representation Index

Balance of Representation Index. +.7 or higher is acceptable, +.6 to +.7 weak acceptable, and below +.6 not acceptable

Content Area	Instrument	Balance of Representation Index
Reading	**Grade 4, Spring 2003**	**.1**
	Grade 8, Spring 2003	**.1**
	Grade 10, Spring 2003	**-.1**
	Grade 10, Spring 2002	.2
	Grade 10, Fall 2002	.3
Mathematics	**Grade 4, Spring 2003**	**0**
	Grade 8, Spring 2003	**-1.8**
	Grade 10, Spring 2003	**-3.0**
	Grade 10, Spring 2002	-6.5
	Grade 10, Fall 2002	-3.0
Language Arts	**Grade 4, Spring 2003**	**.6**
	Grade 8, Spring 2003	**0**
	Grade 10, Spring 2003	**-.5**
	Grade 10, Spring 2002	.2
	Grade 10, Fall 2002	.4

Recommendations

1. Alignment seeks to discover how closely connected are the ISAT instruments to the Idaho standards. It does judge the technical quality of the ISAT instruments, only their level of connection to standards. All assessment instruments have limitations with regard to their ability to assess all aspects of a given area, at an appropriate level of cognition due to the need for sampling.

2. An alignment study should not be considered to provide a summative evaluation of pass or fail. This study specifically looks at alignment from four different points of view: 1) Categorical Concurrence, 2) Depth of Knowledge, 3) Range of Knowledge and 4) Balance of Knowledge.

3. Each of these areas should be examined individually. Results from the four criteria areas should be considered in the order listed above. If an instrument in low in Categorical Concurrence the other three criteria are of less importance – if the test does not assess what it is intended to assess.

4. When drawing conclusions from the results reported in this study, the most practical weight should be placed in the area of Categorical Concurrence, slightly less practical weight in the area of Depth of Knowledge, and the least on Range of Knowledge and Balance of Knowledge.

5. While this alignment examined three sets of instruments at the 10^{th} grade level, the current Spring 2003 versions should be examined first.

6. First priority for developing new/additional items for the ISAT, should be determined by first looking at the area of Categorical Concurrence. The criteria used in this model requires at least 6 items per standard. Standards with less than 6 items should be addressed by new items, and especially those Standards that are currently only addressed by zero or one to two items.

7. Within the standards that are low in Categorical Concurrence, look at the number of items listed for each of the Content Knowledge and Skills. Effort should be made to add items to Content Knowledge and Skill areas that are currently assessed by few or no items.

8. Second priority for developing new/additional items for the ISAT should be determined by next looking at the area of Depth of Knowledge. While multiple choice assessments are limited in their ability to assess standards at the higher levels, especially levels

3 and 4, item writers should attempt to develop items at a Depth of Knowledge level consistent with the level at which the Standard and/or Content Knowledge and Skill is written.

9. If these two tasks are completed, Range of Knowledge and Balance of Knowledge scores should increase.

10. Discussion should take place regarding the appropriate use and strong limitations of these results with regard to the area of Language Arts. Idaho Standards include Reading, Writing, Speaking, Listening and Viewing. While Reading is assessed (and addressed separately in this alignment), speaking, listening and viewing are virtually unassessed, and only a few parts of writing are assessed indirectly with the ISAT in Language Arts.

SECTION TWO

READING

Findings and Conclusions

Comments:

NWEA aligned items/tasks in the Spring 2003 instrument to Idaho state standards. The eighth column in the Alignment Tables 2.1 through 2.5 "NWEA #s items presents the number of items aligned per Content Knowledge and Skills Objectives and Idaho Standards. While the numbers are different from those assigned by NWREL, the proportions are very similar. Again, NWREL aligned a single item/task with up to a maximum of three Content Knowledge and Skills Objectives while NWEA only aligned a single item with a single objective.

NWREL also found some items/tasks in the Language Arts section of the instrument which were felt to align with objectives in the Reading standards. In the fourth column "Item #s" these item numbers are indicated by an item number followed by the letters LA.

Neither the Idaho standards nor the Idaho content knowledge and skills objectives include a reference to "vocabulary." The ISAT does include items/tasks that were felt to technically be only assess vocabulary, and in many cases specific vocabulary. Rather than not align these items/tasks with any content knowledge and skills objectives, they were aligned with the less specific standard one "Read a variety of traditional and electronic materials for information and understanding ," under the first (i.e. 707.1a at the fourth grade level) content knowledge and skills objective "use decoding strategies to fluently read fourth grade materials." This occurred at all grade levels and versions of the instrument.

On page 8 of the 10th grade Spring 2003 reading instrument there appeared to be a possible spelling/typographical error in the 6th line from the end of the passage with the word "powwow" (?power).

It was felt that item 42 on the grade 4 Reading assessment and items 23 and 27 in the 4th grade Language Arts assessment did not align with any of the Idaho standards. Those reading items at all grade levels that were primarily 'vocabulary' items were considered to be weak.

In completing the alignment, NWREL staff referred not only to the Idaho Standards (column one in the state standards document) and the Idaho Content Knowledge and Skills (column two in the state standards document), but also to the third column, "Sample of Applications." These were used for further clarification of the standards and documents. In some cases the sample applications were not clearly aligned with the standards and content knowledge and skills, or were quite limited in nature.

The proportion of items/tasks across the content standards is very disproportionate. This may be accented by the practice of assigning a single item/task to multiple objectives and the fact that many items only aligned with the most generic standard, in most cases the first one. If one looks at the number of total items (indicated in column 5 of Figures 2.1 through 2.5) one will get a feeling for this. Figure 2.0 below provides an overview of this situation.

Of the three tenth grade instruments (Spring 2002, Fall 2002, and Spring 2003) the Spring 2003 appears to be the weakest of the three in relation to meeting the 3 criteria (Categorical Concurrence, Depth of Knowledge, and Range of Knowledge) for each of the standards.

Table 2.0
Comparison of Number of Items Per Standard in Reading Instruments

Standard No.	Number of Items Grade 4 Spring 2003	Number of Items Grade 8 Spring 2003	Number of Items Grade 10 Spring 2003	Number of Items Grade 10 Fall 2002	Number of Items Grade 10 Spring 2002
1	93	52	94	102	100
2	2	4	2	4	6
3	6	5	3	9	14
4	0	19	0	0	1
5	3	3	8	6	3
TOTAL	104	83	107	121	124

As new items are developed for the ISAT, this should be addressed whenever possible to attempt to create better balance. The standards with 0 listed in the figure above should especially be considered for item/task development.

It should be realized that the Acceptable Depth of Knowledge (column 10 on Figures 2.1 through 2.5) provides a picture that may be misleading. It is possible to a standards or objective to meet the criteria for "Acceptable" while it only has one or two items aligned with it.

Findings By Standard

[The Score number on each of the instruments below is an attempt to summarize the findings across the three criteria. The total possible is the number of standards multiplied by three (the number of criteria). That ratio is then converted to a percentage to allow comparison across grades.]

Fourth Grade Reading, Spring 2003 Instrument
Score 7 out of 15 = 46.7%

Standard 1	Meets criteria for Categorical Concurrence, Depth of Knowledge and Range of Knowledge
Standard 2	Meets only the criteria for Depth of Knowledge. Only two items assess this standard, and 80% of the objectives have no items aligned to them.
Standard 3	Meets criteria for Categorical Concurrence and Range of Knowledge. All items are below the Depth of Knowledge level of the standard.
Standard 4	Does not meet any of the three criteria. No items aligned to this standards.
Standard 5	Meets Range of Knowledge criteria only.

Eighth Grade Reading, Spring 2003 Instrument
Score 8 out 15 = 53.3%

Standard 1	Meets criteria for Categorical Concurrence, Depth of Knowledge and Range of Knowledge
Standard 2	Does not meet any of the three criteria, even though there are 4 aligned items.
Standard 3	Meets Range of Knowledge criteria only.
Standard 4	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 5	Meets criteria for Depth of Knowledge and Range of Knowledge with only 3 aligned items.

Grade 10 Reading, Spring 2002 Instrument
Score 6 out of 15 = 40%

Standard 1	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 2	Meets criteria for Categorical Concurrence only.
Standard 3	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 4	Does not meet any of the three criteria, with 1 aligned item.
Standard 5	Meets criteria for Depth of Knowledge only.

Grade 10 Reading, Fall 2002 Instrument
Score 8 out of 15 = 53.3%

Standard 1	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 2	Meets criteria for Range of Knowledge.
Standard 3	Meets criteria for Categorical Concurrence and Range of Knowledge
Standard 4	Does not meet any of the three criteria, with no aligned items.
Standard 5	Meets all three criteria.

Grade 10 Reading, Spring 2003 Instrument
Score 5 out of 15 = 33.3%

Standard 1	Meets criteria for Categorical Concurrence and Range of Knowledge
Standard 2	Does not meet any of the three criteria, with 2 aligned items.
Standard 3	Does not meet any of the three criteria, with 3 aligned items.
Standard 4	Does not meet any of the three criteria, with no aligned items.
Standard 5	Meets all three criteria.

707 Reading

Reading Tables

Table 2.1
Grade 4 Reading Spring 2003
Alignment Table

Rationale: Read a variety of grade-level materials and apply strategies appropriate to various situations.

Item #	Standard /statement	Depth of Knowledge	Item #'s	Total # of items	# items per cog. Level	% items per cog level	NWEA #s items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
707.1	**Read a variety of traditional and electronic materials for information and understanding**	**2**		**93**	**1. 23 2. 70 3. 0 4. 0**	**1. 24.7 % 2. 75.3 3. 4.**	**21**	**Yes**	**Yes**	**82.4% Yes**
707.1a	Use decoding strategies to fluently read fourth-grade materials.	1	1,2,8,9,10,12,14,17,18,22,24,25,26,27,28,30,31,35,36,37	20	1. 6 2. 14 3. 0 4. 0	1. 30% 2. 70 3. 4.	**5**		Yes	
707.1b	Use spelling pattern syllabication and other strategies to identify words.	1	3,4,20,34	4	1. 3 2. 1 3. 0 4. 0	1. 75% 2 .25 3. 4.	**2**		No	
707.1c	Use phonics cues to automatically and accurately identify and pronounce words.	1	4,20	2	1. 2 2. 0 3. 0 4. 0	1. 100% 2. 0 3. 4.	**1**		Yes	
707.1d	Apply knowledge of derivations, synonyms, autonyms, homonyms and idioms to determine meanings of words and phrases.	2	6,12,14,16,18,36	6	1. 4 2. 2 3. 0 4. 0	1. 67% 2. 33 3. 4.	**4**		No	
707.1e	Use knowledge of root words to determine meanings of unknown words within a passage.	2	9,36,14,35	4	1. 2 2. 2 3. 0 4. 0	1. 50% 2. 50 3. 4.	**3**		Yes	
707.1f	Use context clues to choose correct meaning of identified words within a reading passage.	2	1,3,6,7,9,11,21,23,25,28,32,37,38,41	14	1. 0 2. 14 3. 0	1. 2. 100% 3.	**3**		Yes	

Item #	Standard /statement	Depth of Knowledge	Item #'s	Total # of items	# items per cog. Level	% items per cog level	NWEA #s items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4. 0	4.				
707.1g	Recognize the relationship between a pronoun and its referent.	1	5 LA	1	1. 0 2. 1 3. 0 4. 0	1. 2. 100% 3. 4.			Yes	
707.1h	Recognize words that signal transitions to determine sequences as well as contribution to text's meaning.	1	10,15	2	1. 1 2. 1 3. 0 4. 0	1. 50% 2. 50 3. 4.	**2**		Yes	
707.1i	Use knowledge of written language to anticipate words when reading.	1		0	1. 0 2. 0 3. 0 4 0	1. 0% 2. 3. 4.			No	
707.1j	Use knowledge of written language to comprehend text.	1	2,5,6,7,8,10, 11,15,19,21, 22,23,24,28, 29,30,31,38	18	1. 3 2. 15 3. 0 4. 0	1. 16% 2. 83.3 3. 4.			Yes	
707.1k	Before, during, and after reading, locate information to clarify text structure and content.	2	15	1	1. 0 2. 1 3. 0 4. 0	1. 2. 100% 3. 4.			Yes	
707.1l	Identify and begin to use analytic processes for understanding and remembering words, phrases, and information from reading material.	2		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	
707.1m	Locate and gather information for a variety of purposes.	2		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	
707.1n	Paraphrase and summarize text.	2	13	1	1. 0 2. 1 3. 0 4. 0	1. 2. 100% 3. 4.	**1**		Yes	
707.1o	Draw inferences and conclusions from text.	2	1,5,7,13,19, 23,25,29,30, 31,32,41	12	1. 1 2. 11 3. 0 4. 0	1. 8.3% 2. 91.7 3. 4.			Yes	

Item #	Standard /statement	Depth of Knowledge	Item #'s	Total # of items	# items per cog. Level	% items per cog level	NWEA #s items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
707.1p	Identify language and literary devices: - Mood; Tone; Style; Figurative language; Format; Structure	2	19,21	2	1. 1 2. 1 3. 0 4. 0	1. 50% 2. 50 3. 4.			Yes	
707.1q	Determine main idea or essential message within a text and identify relevant details and facts.	2	2,5,11,13, 22, 23,	6	1. 0 2. 6 3. 0 4. 0	1. 2. 100% 3. 4.			Yes	
707.2	**Read and respond to a variety of literature to compare and contrast the many dimensions of human experience.**	**2**		**2**	**1. 1 2. 1 3. 0 4. 0**	**1. 50% 2. 50 3. 4.**	**5**	**No**	**Yes**	**No 16.7%**
707.2a	Identify defining characteristics of the following literary forms and genres: fiction, nonfiction, fairy tales, fables, myths, poems, and plays.	2	26,33	2	1. 1 2. 1 3. 0 4. 0	1. 50% 2. 50 3. 4.	**2**		Yes	
707.2b	Evaluate new information and hypotheses by testing against known information and ideas.	3		0	1. 0 2. 0 3. 0 4. 0	1. 0% 2. 3. 4.	**1**		No	
707.2c	Compare and contrast information about same topic after reading two or more passages or articles.	3		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	
707.2d	Demonstrate understanding of the role of reading to enrich, inform, and serve as a tool for lifelong learning.	2		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	
707.2e	Distinguish between cause and effect and fact and opinion within expository text.	2		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	
707.2f	Determine main idea of text and identify relevant and supporting details and facts;	2		0	1. 0 2. 0	1. 2.	**2**		No	

Item #	Standard /statement	Depth of Knowledge	Item #'s	Total # of items	# items per cog. Level	% items per cog level	NWEA #s items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	arrange in chronological order.				3. 0 4. 0	3. 4.				
707.3	**Read a variety of traditional, technical, and electronic materials for critical analysis and evaluation.**	**3**		**6**	**1. 0 2. 6 3. 0 4. 0**	**1. 2. 100% 3. 4.**	**11**	**Yes**	**No**	**Yes 60%**
707.3a	Identify author's purpose and describe how language, setting, and information, support purpose within literary text.	3	38,41	2	1. 0 2. 2 3. 0 4. 0	1. 2. 100% 3. 4.	**2**		No	
707.3b	Identify the following story elements within a literary text; -Characters and their traits and motivations to determine causes for actions; Setting; Main events of plot; Point of view; Problems and solutions.	3	24	1	1. 0 2. 1 3. 0 4. 0	1. 2. 100% 3. 4.			No	
707.3c	Compare and contrast information from multiple sources.	3		0	1. 0 2. 0 3. 0 4 .0	1. 2. 3. 4.	**1**		No	
707.3d	Use personal or objective criteria to do the following: -Draw conclusions; Make inferences; Decide meanings; Form opinions; Make judgments	3		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.	**5**		No	
707.3e	Distinguish between statements of fact and opinion and identify cause and effect relationships within narrative and expository text.	2	29,32,40	3	1. 0 2. 3 3. 0 4. 0	1. 2. 100% 3. 4.	**3**		No	
707.4	**Read to locate information from a variety of traditional, technical, and electronic sources.**	**2**		**0**	**1. 0 2. 0 3. 0 4. 0**	**1. 2. 3. 4.**	**4**	**No**	**No**	**No 0%**
707.4a	Use appropriate strategies when reading for the following purposes:	2		0	1. 0 2. 0	1. 2.			No	

Item #	Standard /statement	Depth of Knowledge	Item #'s	Total # of items	# items per cog. Level	% items per cog level	NWEA #s items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	-Full comprehension; Locating information; Personal enjoyment.				3. 0 4. 0	3. 4.				
707.4b	Generate questions about important and interesting issues; use discussion to narrow research.	2		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.	**1**		No	
707.4c	Organize and interpret information to draw logical conclusions based on investigation.	2		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.	**3**		No	
707.4d	Present acquired information in the form of a letter, report, story, and poster.	1		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	
707.5	**Read for technical information**	**2**		**3**	**1. 3 2. 0 3. 0 4. 0**	**1. 100% 2. 3. 4.**	**0**	**No**	**No**	**Yes 50%**
707.5a	Identify and use such traditional sources as reference books, library materials, experts, and electronically-stored sources to locate and acquire information.	2	39	1	1. 1 2. 0 3. 0 4. 0	1. 100% 2. 3. 4.			No	
707.5b	Identify use of graphics, graphs, tables, diagrams, parentheses, italics, and bold print.	2	17,39	2	1. 2 2. 0 3. 0 4. 0	1. 100% 2. 3. 4.			No	
707.5c	Identify format of various technical and reference texts.	2		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	
707.5d	Locate and understand sequence words.	1		0	1. 0 2. 0 3. 0 4. 0	1. 2. 3. 4.			No	

743 Reading

Table 2.2
Grade 8 Reading Spring 2003
Alignment Table

Rationale: Read a variety of grade-level materials and apply strategies appropriate to various situations.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
743..1	**Read a variety of traditional and electronic materials for information and understanding**	**2**		**52**	**1. 18 2. 34 3. 4.**	**1. 34.6% 2. 65.4% 3. 4.**	**21**	**Yes**	**Yes**	**Yes 67%**
743.1a	Use decoding strategies and other visual information to fluently read grade-level text. -Graphophonic sources (letter/sound); Semantic sources (meaning/association); Lexical sources (word knowledge); Text elements (graphic elements, illustrations, titles/subtitles)	2	42LA,33LA,38LA 1,2,4,5,6,7,8,9,10, 11,12,13,15,16,17, 18,19,20,21,22,23, 25,26,27,28,29,30, 31,32,33,34,35	41	1.16 2. 25 3. 4.	1.39% 2.61% 3. 4.	**15**		Yes	
743.1b	Search purposefully for particular information: -Identity literal and inferential meanings; Search own background information to make meaning of test passages; Search for most important information based on purpose for reading; Search for information about characters and setting to understand plot; Development in narratives; Search for expository text structures such as cause/effect, chronological, problem/solution, and classification to understand text.	2	4,17,28,31,33, 35,37	8	1. 2. 8 3. 4.	1. 2.100% 3. 4.	**2**		Yes	
743.1c	Predict alternatives or probabilities in text on basis of prior knowledge and information with text. -Synthesize information from text to anticipate outcomes; Use connections	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**1**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	between text-to-text, text-to self, and text-to world to anticipate new text.									
743.1d	Reconsider a response against more than one source of information of grade-level text.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
743.1e	Confirm or self-correct predictions in response to grade-level text.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
743.1f	Identify literary devices; -Mood; Tone; Style; Figurative language	3	24,34,41	3	1. 2 2. 1 3. 4.	1. 67% 2.33% 3. 4.	**3**		No	
743.2	**Read and respond to a variety of literature to compare and contrast the many dimensions of human experience.**	**3**		**4**	**1. 3 2. 1 3. 4.**	**1.75% 2.25% 3. 4.**	**4**	**No**	**No**	**No 40%**
743.2a	Define characteristics of the following literary forms and genres: fiction and nonfiction, including novel, short story, poetry, biography, plays, essays, and reference material	2	6,12,14	3	1. 3 2. 3. 4.	1.100% 2. 3. 4.	**2**		No	
743.2b	Activate and draw upon own experiences to connect to reading selections.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**2**		No	
743.2c	Identify social, cultural and historical significance of various types of text.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
743.2d	Identify how an author uses language and literary devices to evoke a response in a reader:	3	24	1	1. 2. 1 3.	1. 2.100% 3.	**0**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	-Style; Format; Structure; Point of view				4.	4.				
743.2e	Explain how reading can provide enrichment and information as well as serve as a tool of lifelong learning.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
743.3	**Read a variety of traditional, technical, and electronic materials for critical analysis and evaluation.**	**3**		**5**	**1. 1** **2. 4** **3.** **4.**	**1. 20%** **2. 80%** **3.** **4.**	**9**	**No**	**No**	**Yes 80%**
743.3a	Identify author's purpose and describe how language, setting, and information support that purpose in literary text.	3	13	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	**0**		No	
743.3b	Analyze literary text for the following elements: -Characters; Setting; Plot structure; Theme; Conflict; Resolution; Symbolism	3	6	1	1. 1 2. 3. 4.	1. 100% 2. 3. 4.	**1**		No	
743.3c	Compare and contrast information from multiple sources.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**1**		No	
743.3d	Use personal or objective criteria to do the following: -Draw conclusions; Make inferences; Determine meaning; Form opinions; Make judgments.	3	18,20	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	**6**		No	
743.3e	Distinguish between fact and opinion and identify cause and effect relationships within expository text.	3	3	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	**1**		No	
743.4	**Read and respond to a variety of literature to compare and contrast the many dimensions**	**3**		**19**	**1. 3** **2. 16** **3.**	**1. 15.8%** **2. 84.2%** **3.**	**4**	**Yes**	**No**	**Yes 100%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	of human experience.				**4.**	**4.**				
743.4a	Use questions to guide reading: -Identify type of information required to answer a specific question; Independently select resources for answering questions; Read for purpose of answering specific questions.	3	8,9,11,15,18, 25,26,30,35, 36,37,LA21	12	1. 2 2. 10 3. 4.	1.16.7% 2.83.3% 3. 4.	**0**		No	
743.4b	Use knowledge of common patterns of factual texts to enhance comprehension: -Description; Main idea/supporting details; Comparison/contrast; Chronological order; Cause/effect; Process	2	22,28,31,38, LA17	5	1. 1 2. 4 3. 4.	1.20% 2.80% 3. 4.	**0**		Yes	
743.4c	Synthesize what has been read: -Identify main idea and supporting details; Identify important information, patterns, and themes; Connect new information with prior knowledge to enhance understanding and memory; Ask questions; Use prior knowledge and text information to draw conclusions, make critical judgments, and form unique interpretations from text.	3	20,33,	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	**4**		No	
743.5	**Read for technical information**	**2**		**3**	**1. 1 2. 2 3. 4.**	**1.33% 2.67% 3. 4.**	**2**	**No**	**Yes**	**Yes 50%**
743.5a	Identify and use comprehension strategies to understand technical text.	2	30,36	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.	**0**		Yes	
743.5b	Explain use of graphics, layout, white space, italics, parentheses, and other visual aids.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**2**		No	
743.5c	Identify organization of technical texts.	2		0	1.	1.	**0**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					2. 3. 4.	2. 3. 4.				
743.5d	Use technical information to complete tasks.	2	28	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	**0**		No	

752 Reading

Table 2.3
Grade 10 Reading Spring 2002
Alignment Table

Rationale: Read a variety of grade-level materials and apply strategies appropriate to various situations.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.1	**Read a variety of traditional and electronic materials for information and understanding**	**3**		**100**	**1. 4 2. 93 3. 3 4.**	**1. 4% 2. 93% 3. 3% 4.**		**Yes**	**No**	**Yes 87.5%**
752.1a	Decode unfamiliar words using a comprehensive set of reading strategies: -Phonics; Context clues; Word Analysis skills.	2	1,2,3,4,5,6,7, 8,9,11,13,15, 20,21,23,26, 27,30,31,32, 33,35,38,40, 41,43,45,46, 48,51,52,54	32	1. 4 2. 28 3. 4.	1.12.5% 2.87.5% 3. 4.			Yes	
752.1b	Preview materials to understand structure and anticipate content.	2	6,47	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
752.1c	Develop analytic processes for understanding and remembering words, phrases, and information from reading material.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.1d	Identify, collect, and/or select, and relate pertinent information to given situations.	3	1,3,8,10,11,12,14, 15,16,17,18,21,25 26,27,28,29,30, 32,34,40,42,43, 47,50,55,	26	1. 2. 26 3. 4.	1. 2.100% 3. 4.			No	
752.1e	Synthesize and organize information.	3	2,10,35,42	4	1. 2. 4 3. 4.	1. 2.100% 3. 4.			No	
752.1f	Apply and extend information.	3	14,16,9,36,37	5	1. 2. 3 3. 2	1. 2.60% 3.40%			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
752.1g	Explain how an author uses language and literary devices: -Mood; Tone; Style; Figurative language; Format; Structure	3	5,25,34	3	1. 2. 3 3. 4.	1. 2.100% 3. 4.			No	
752.1h	Use reading strategies to determine main ideas and to collect data, facts, and ideas.	2	6,9,10,11,12, 14,15,16,17, 18,19,21,22, 24,25,27,28, 29,30,32,34, 35,37,40,42, 43,47,55	28	1. 2. 27 3. 1 4.	1. 2.96.4% 3.3.6% 4.			Yes	
752.2	**Read and respond to a variety of literature to compare and contrast the many dimensions of human experience.**	**3**		**6**	**1. 2. 6 3. 4.**	**1. 2.100% 3. 4.**		**Yes**	**No**	**No 40%**
752.2a	Know define characteristics of literary forms and genres (fictions, nonfiction, myths, poems, biographies, autobiographies, science fiction, parodies, satires, and plays).	2	18	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
752.2b	Identify and compare own experiences to those of others in situations, events, and cultures within reading selections.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.2c	Interpret the social, cultural, and historical significance of a text: -Ancient Literature; British Literature; American Literature; World Literature	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.2d	Evaluate how an author uses language and literary devices to evoke a response in a reader: -Style; Format; Structure	3	17,22,24,50,53	5	1. 2. 5 3. 4.	1. 2.100% 3. 4.			No	
752.2e	Demonstrate how reading can provide enrichment, information, and serve as a tool for lifelong learning.	3		0	1. 2. 3.	1. 2. 3.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
752.3	**Read a variety of traditional, technical, and electronic materials for critical analysis and evaluation**	**3**		**14**	**1. 2. 12 3. 2 4.**	**1. 2.85.7% 3.14.3% 4.**		**Yes**	**No**	**Yes 100%**
752.3a	Evaluate the validity and accuracy of information	3	29	1	1. 2. 1 3. 4.	1. 2.100% 3. 4			No	
752.3b	Analyze author's purpose within a literary text: -Characterization; Setting; Plot structure; Theme; Point of view; Organization and form.	3	22,24,28,36,53	5	1. 2. 4 3. 1 4.	1. 2.80% 3.20% 4			No	
752.3c	Compare and contrast selections within texts.	3	26,55	2	1. 2. 2 3. 4.	1. 2. 100% 3. 4.			No	
752.3d	Form opinions and make judgments about fiction and non-fiction.	3	8,37,49,50	4	1. 2. 3 3. 1 4.	1. 2.75% 3.25% 4.			No	
752.3e	In response to technical materials, use personal or objective criteria to: -Draw conclusions; Make inferences; Decide meanings; Form opinions; Make judgments.	3	44,49	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			No	
752.4	**Read to locate information from a variety of traditional, technical and electronic sources.**	**3**		**1**	**1. 2. 1 3. 4.**	**1. 2.100% 3. 4.**		**No**	**No**	**No 33%**
752.4a	Generate relevant and researchable questions.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.4b	Systematically organize and record information.	2	39	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
752.4c	Produce research projects and reports.	4		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.5	**Read for technical information**	**2**		**3**	**1. 2. 3 3. 4.**	**1. 2. 100% 3. 4.**		**No**	**Yes**	**No 40%**
752.5a	Comprehend technical text.	2	12,39	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			No	
752.5b	Demonstrate understanding of graphics, layout, white space, italics, parentheses, and other visual aids.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.5c	Identify the organization and nature of technical texts; ascertain that such texts require precise understanding rather than interpretation.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.5d	Apply technical text information to daily situations.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.5e	Follow written instructions.	2	19	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	

752 Reading

Table 2.4
Grade 10 Reading Fall 2002
Alignment Table

Rationale: Read a variety of grade-level materials and apply strategies appropriate to various situations.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.1	**Read a variety of traditional and electronic materials for information and understanding**	**3**		**102**	**1. 8 2. 89 3. 5 4. 0**	**1. 7.8% 2. 87.3% 3. 4.9% 4. 0%**		**Yes**	**No**	**Yes 75%**
752.1a	Decode unfamiliar words using a comprehensive set of reading strategies: -Phonics; Context clues; Word Analysis skills.	2	1,2,3,4,5,6,7, 8,9,10,11,12, 13,14,15,16, 17,18,19,20,21, 22,23,24,25,26, 27,28,29,33,34, 35,36,37,38,39, 40,41,42,43,44, 45,46,49,50,51, 52,53,54	49	1. 8 2. 38 3. 3 4.	1.16.3% 2.77.6% 3.6.1% 4.			Yes	
752.1b	Preview materials to understand structure and anticipate content.	2	55	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
752.1c	Develop analytic processes for understanding and remembering words, phrases, and information from reading material.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.1d	Identify, collect, and/or select, and relate pertinent information to given situations.	3	21,26,28,29,30, 31,32,36,39, 40,52,53	12	1. 2. 12 3. 4.	1. 2. 100% 3. 4.			No	
752.1e	Synthesize and organize information.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.1f	Apply and extend information.	3	1,4,14,17,35,50	6	1. 2. 5 3. 1 4.	1.81.7% 2.18.3% 3. 4.			No	
752.1g	Explain how an author uses language and literary devices: -Mood; Tone; Style; Figurative language; Format; Structure	3	47	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			No	
752.1h	Use reading strategies to determine main ideas and to collect data, facts, and ideas.	2	1,2,6,7,8,9, 12,14,16,17, 18,20,21,24, 25,26,27,28, 30,31,32,33, 36,37,38,39, 40,42,44,47, 48,49,52,53	33	1. 2. 32 3. 1 4.	1. 2.97% 3.3% 4.			Yes	
752.2	**Read and respond to a variety of literature to compare and contrast the many dimensions of human experience.**	**3**		**4**	**1. 2. 4 3. 4.**	**1. 2.100% 3. 4.**	**No**	**No**	**No**	**Yes 60%**
752.2a	Know define characteristics of literary forms and genres (fictions, nonfiction, myths, poems, biographies, autobiographies, science fiction, parodies, satires, and plays).	2	46	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
752.2b	Identify and compare own experiences to those of others in situations, events, and cultures within reading selections.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.2c	Interpret the social, cultural, and historical significance of a text: -Ancient Literature; British Literature; American Literature; World Literature	3	46	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			No	
752.2d	Evaluate how an author uses language and literary devices to evoke a response in a reader:	3	33,47	2	1. 2. 2 3.	1. 2.100% 3.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	-Style; Format; Structure				4.	4.				
752.2e	Demonstrate how reading can provide enrichment, information, and serve as a tool for lifelong learning.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.3	**Read a variety of traditional, technical, and electronic materials for critical analysis and evaluation**	**3**		**9**	**1. 2. 7 3. 2 4.**	**1. 2.77.8% 3.22.2% 4.**		**Yes**	**No**	**Yes 80%**
752.3a	Evaluate the validity and accuracy of information	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.3b	Analyze author's purpose within a literary text: -Characterization; Setting; Plot structure; Theme; Point of view; Organization and form.	3	20,35,49,50	4	1. 2. 3 3. 1 4.	1. 2.75% 3.25% 4.			No	
752.3c	Compare and contrast selections within texts.	3	38	1	1. 2. 3. 1 4.	1. 2. 3. 100% 4.			Yes	
752.3d	Form opinions and make judgments about fiction and non-fiction.	3	29,48	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			No	
752.3e	In response to technical materials, use personal or objective criteria to: -Draw conclusions; Make inferences; Decide meanings; Form opinions; Make judgments.	3	48,55	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			No	
752.4	**Read to locate information from a variety of traditional, technical and electronic**	**3**		**0**	**1. 2. 3.**	**1. 2. 3.**		**No**	**No**	**No 0%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	sources.				**4.**	**4.**				
752.4a	Generate relevant and researchable questions.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.4b	Systematically organize and record information.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.4c	Produce research projects and reports.	4		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.5	**Read for technical information**	**2**		**6**	**1. 0** **2. 6** **3.** **4.**	**1.** **2. 100%** **3.** **4.**		**Yes**	**Yes**	**Yes 60%**
752.5a	Comprehend technical text.	2	30,31,32	3	1. 2. 3 3. 4.	1. 2.100% 3. 4.			No	
752.5b	Demonstrate understanding of graphics, layout, white space, italics, parentheses, and other visual aids.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.5c	Identify the organization and nature of technical texts; ascertain that such texts require precise understanding rather than interpretation.	2	18	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
752.5d	Apply technical text information to daily situations.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
752.5e	Follow written instructions.	2	4,55	2	1.	1.			Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					2. 2 3. 4.	2.100% 3. 4.				

752 Reading

Table 2.5
Grade 10 Reading Spring 2003
Alignment Table

Rationale: Read a variety of grade-level materials and apply strategies appropriate to various situations.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.1	**Read a variety of traditional and electronic materials for information and understanding**	**3**		**94**	**1. 20 2. 74 3. 4.**	**1. 21.3% 2. 78.7% 3. 4.**	**39**	**Yes**	**No**	**Yes 62.5%**
752.1a	Decode unfamiliar words using a comprehensive set of reading strategies: -Phonics; Context clues; Word Analysis skills.	2	**2,3,4,5,6,7,8,9, 10,11,12,13,14, 15,16,18,19,20, 21,22,23,24,25, 26,27,28,29,30, 31,32,33,34,35, 36,37,38,39,40, 41,42,43,44,45, 49,50,51,52,55**	48	1. 15 2. 35 3. 4.	1.31.5% 2.68.5% 3. 4.	**18**		Yes	
752.1b	Preview materials to understand structure and anticipate content.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.1c	Develop analytic processes for understanding and remembering words, phrases, and information from reading material.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.1d	Identify, collect, and/or select, and relate pertinent information to given situations.	3	5,11,15,16,21, 22,30,33,38, 49,50,51	12	1. 2. 12 3. 4.	1. 2.100% 3. 4.	4		No	
752.1e	Synthesize and organize information.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**3**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.1f	Apply and extend information.	3	34	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	**6**		No	
752.1g	Explain how an author uses language and literary devices: -Mood; Tone; Style; Figurative language; Format; Structure	3	8,23,46,48,53,54	6	1. 4 2. 2 3. 4.	1.67% 2.33% 3. 4.	**3**		NO	
752.1h	Use reading strategies to determine main ideas and to collect data, facts, and ideas.	2	1,3,5,11,13,14,15, 16,20,21,22,23,27, 29,30,31,32,33, 34,38,39,41,43, 45,46,50,51	27	1. 1 2. 26 3. 4.	1.3.7% 2.96.3 3. 4.	**5**		Yes	
752.2	**Read and respond to a variety of literature to compare and contrast the many dimensions of human experience.**	**3**		**2**	**1. 2. 2 3. 4.**	**1. 2.100% 3. 4.**	**5**	**No**	**No**	**No 40%**
752.2a	Know define characteristics of literary forms and genres (fictions, nonfiction, myths, poems, biographies, autobiographies, science fiction, parodies, satires, and plays).	2	18,21	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	**3**		Yes	
752.2b	Identify and compare own experiences to those of others in situations, events, and cultures within reading selections.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.2c	Interpret the social, cultural, and historical significance of a text: -Ancient Literature; British Literature; American Literature; World Literature	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**1**		No	
752.2d	Evaluate how an author uses language and literary devices to evoke a response in a reader: -Style; Format; Structure	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**1**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.2e	Demonstrate how reading can provide enrichment, information, and serve as a tool for lifelong learning.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.3	**Read a variety of traditional, technical, and electronic materials for critical analysis and evaluation**	**3**		**3**	**1. 2** **2. 1** **3.** **4.**	**1.67%** **2.33%** **3.** **4.**	**7**	**No**	**No**	**No** **40%**
752.3a	Evaluate the validity and accuracy of information	3	17,47	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.	**3**		No	
752.3b	Analyze author's purpose within a literary text: -Characterization; Setting; Plot structure; Theme; Point of view; Organization and form.	3	46	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	0		No	
752.3c	Compare and contrast selections within texts.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.3d	Form opinions and make judgments about fiction and non-fiction.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.3e	In response to technical materials, use personal or objective criteria to: -Draw conclusions; Make inferences; Decide meanings; Form opinions; Make judgments.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**4**		No	
752.4	**Read to locate information from a variety of traditional, technical and electronic**	**3**		**0**	**1.** **2.** **3.**	**1.** **2.** **3.**	**2**	**No**	**No**	**No** **0%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	sources.				**4.**	**4.**				
752.4a	Generate relevant and researchable questions.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.4b	Systematically organize and record information.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	2		No	
752.4c	Produce research projects and reports.	4		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.5	**Read for technical information**	**2**		**8**	**1. 1** **2. 7** **3.** **4.**	**1. 12.5%** **2. 87.5%** **3.** **4.**	**1**	**Yes**	**Yes**	**Yes 60%**
752.5a	Comprehend technical text.	2	9,17,27	3	1. 2. 3. 3 4.	1. 2. 3.100% 4.	**0**		Yes	
752.5b	Demonstrate understanding of graphics, layout, white space, italics, parentheses, and other visual aids.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.5c	Identify the organization and nature of technical texts; ascertain that such texts require precise understanding rather than interpretation.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
752.5d	Apply technical text information to daily situations.	2	6,7	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	**0**		Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
752.5e	Follow written instructions.	2	6,7,26	3	1. 1 2. 2 3. 4.	1.33% 2.67% 3. 4.	**1**		Yes	

SECTION 3
MATHEMATICS

Mathematics Findings and Conclusions

Comments:

NWEA aligned items/tasks in the Spring 2003 instrument to Idaho state standards. The eighth column in the Alignment Tables 2.1 through 2.5 "NWEA #s items presents the number of items aligned per Content Knowledge and Skills Objectives and Idaho Standards. While the numbers are different from those assigned by NWREL, the proportions are very similar. Again, NWREL aligned a single item/task with up to a maximum of three Content Knowledge and Skills Objectives while NWEA only aligned a single item with a single objective.
In virtually all cases, math items/tasks were only aligned to a single Content Knowledge and Skills objective.

The grain size of Idaho Content Knowledge and Skills areas is much smaller than in other content areas.

Some items should be considered for revision and strengthening.

- On the 4th grade instrument, this includes items: 8, 9, and 11.
- On the 8th grade instrument, this includes items: 4, 14, 28, 29, 30, 31, and 36. On the 8th grade instrument, it was felt that items 9 and 10 did not assess any of the Idaho standards or objectives, and that item 7 assesses a "box and whisker" chart that is not mentioned in Idaho standards or objectives, though it was loosely aligned with 341.2a.
- On the Fall 2002 tenth grade instrument, this includes items that are considered to be a 'poor' match to standards: items 23, 38, 42, and 59. Item 18 was felt to not match any Idaho standards.
- On the Spring 2002 tenth grade instrument, this includes items that are considered to be a 'poor' match to standards: items 1, 9, 17, 23, and 28. Items 2, 13, 15, 22, 26, 36, 37, 40, and 45 were felt not to match any Idaho standards.
- On the Spring 2003 tenth grade instrument, items 22, 30, and 46 did not match any Idaho standards.

Table 3.0
Comparison of Number of Items Per Standard in Mathematics Instruments

Standard No.	Number of Items Grade 4 Spring 2003	Number of Items Grade 8 Spring 2003	Number of Items Grade 10 Spring 2003	Number of Items Grade 10 Fall 2002	Number of Items Grade 10 Spring 2002
1	7	7	12	13	13
2	7	9	2	0	2
3	1	0	0	1	2
4	6	3	5	14	5
5	0	0	0	1	0
6	0	0	0	0	0
7	0	0	0	0	0
8	8	4	3	4	2
9	3	0	3	2	2
10	0	2	3	2	2
11	0	0	0	1	1
12	5	1	1	0	0
13	0	3	4	4	3
14	3	1	6	2	0
15	0	5	5	4	4
16	1	0	1	1	1
17	1	0	3	2	2
18	1	2	3	0	1
19	3	0	2	2	0
20		2	1	2	1
21		2	0	0	0
22		0	2	4	4
23		2	3	3	3
24		0	0	0	0
25		0	0	0	0
26			2	0	0
27			0	0	0
TOTAL	46	43	61	62	48

Findings By Standard

[The Score number on each of the instruments below is an attempt to summarize the findings across the three criteria. The total possible is the number of standards multiplied by three (the number of criteria). That ratio is then converted to a percentage to allow comparison across grades.]

Fourth Grade Mathematics, Spring 2003 Instrument
Score 22 out of 57 = 38.6 %

Standard 1:	Meets all three criteria.
Standard 2:	Meets all three criteria.
Standard 3:	Does not meet any of the three criteria with one aligned item.
Standard 4:	Meets the criteria for Depth of Knowledge and Range of Knowledge.
Standard 5:	Does not meet any of the three criteria with no aligned items.
Standard 6:	Does not meet any of the three criteria with no aligned items.
Standard 7:	Does not meet any of the three criteria with no aligned items.
Standard 8:	Meets all three criteria.
Standard 9:	Meets criteria for Depth of Knowledge only with three aligned items.
Standard 10:	Does not meet any of the three criteria with no aligned items.
Standard 11:	Does not meet any of the three criteria with no aligned items.
Standard 12:	Weakly meets the criteria for Categorical Concurrence.
Standard 13:	Does not meet any of the three criteria with no aligned items.
Standard 14:	Meets the criteria for Depth of Knowledge and Range of Knowledge.
Standard 15:	Does not meet any of the three criteria with no items aligned.
Standard 16:	Meets the criteria for Range of Knowledge with one aligned item.

Standard 17: Meets the criteria for Depth of Knowledge and Range of Knowledge with one aligned item.
Standard 18: Meets the criteria for Depth of Knowledge and Range of Knowledge with one aligned item.
Standard 19: Meets the criteria for Depth of Knowledge and Range of Knowledge with three aligned items.

Eighth Grade Mathematics, Spring 2003 Instrument
Score 19 out of 75 = 25.3%

Standard 1: Meets the criteria for Categorical Concurrence and Range of Knowledge
Standard 2: Meets the criteria for Categorical Concurrence and Range of Knowledge
Standard 3: Does not meet any of the three criteria with no aligned items.
Standard 4: Does not meet any of the three criteria with 3 aligned items.
Standard 5: Does not meet any of the three criteria with no aligned items.
Standard 6: Does not meet any of the three criteria with no aligned items.
Standard 7: Does not meet any of the three criteria with no aligned items.
Standard 8: Meets the criteria for Depth of Knowledge and Range of Knowledge with four aligned items.
Standard 9: Does not meet any of the three criteria with no aligned items.
Standard 10: Meets the criteria for Depth of Knowledge and Range of Knowledge with two aligned items.
Standard 11: Does not meet any of the three criteria with no aligned items.
Standard 12: Meets the criteria for Depth of Knowledge with one aligned item.
Standard 13: Meets the criteria for Depth of Knowledge and Range of Knowledge with three aligned items.
Standard 14: Meets the criteria for Depth of Knowledge and Range of Knowledge with one aligned item.
Standard 15: Meets the criteria for Range of Knowledge with five aligned items.
Standard 16: Does not meet any of the three criteria with no aligned items.
Standard 17: Does not meet any of the three criteria with no aligned items.
Standard 18: Meets the criteria for Depth of Knowledge with two aligned items.

Standard 19: Does not meet any of the three criteria with no aligned items.
Standard 20: Meets the criteria for Depth of Knowledge and Range of Knowledge with two aligned items.
Standard 21: Meets the criteria for Range of Knowledge with two aligned items.
Standard 22: Does not meet any of the three criteria with no aligned items.
Standard 23: Meets the criteria for Range of Knowledge with two aligned items.
Standard 24: Does not meet any of the three criteria with no aligned items.
Standard 25: Does not meet any of the three criteria with no aligned items.

Tenth Grade Mathematics, Spring 2003 Instrument
Score 13 out of 81 = 16 %

Standard 1: Meets all three criteria.
Standard 2: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 3: Does not meet any of the three criteria.
Standard 4: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 5: Does not meet any of the three criteria.
Standard 6: Does not meet any of the three criteria.
Standard 7: Does not meet any of the three criteria.
Standard 8: Meets the criteria for Depth of Knowledge and Range of Knowledge.
Standard 9: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 10: Meets the criteria for Depth of Knowledge and Range of Knowledge

Standard 11: Does not meet any of the three criteria.
Standard 12: Meets the criteria for Range of Knowledge
Standard 13: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 14: Meets all three criteria.
Standard 15: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 16: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 17: Meets the criteria for Range of Knowledge
Standard 18: Meets the criteria for Range of Knowledge
Standard 19: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 20: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 21: Does not meet any of the three criteria
Standard 22: Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 23: Does not meet any of the three criteria
Standard 24: Does not meet any of the three criteria
Standard 25: Does not meet any of the three criteria
Standard 26: Meet the criteria for Depth of Knowledge and Range of Knowledge
Standard 27: Does not meet any of the three criteria

Tenth Grade Mathematics, Spring 2002 Instrument
Score 27 out of 81 = 33.3%

Standard 1: Meets all three criteria (Depth of Knowledge met weakly).
Standard 2: Meets criteria for Depth of Knowledge and Range of Knowledge

Standard 3:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 4:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 5:	Does not meet any of the three criteria
Standard 6:	Does not meet any of the three criteria
Standard 7:	Does not meet any of the three criteria
Standard 8:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 9:	Meets the criteria for Range of Knowledge
Standard 10:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 11:	Meets the criteria for Range of Knowledge
Standard 12:	Does not meet any of the three criteria
Standard 13:	Meets the criteria for Range of Knowledge
Standard 14:	Does not meet any of the three criteria
Standard 15:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 16:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 17:	Meets the criteria for Range of Knowledge
Standard 18:	Meets the criteria for Depth of Knowledge
Standard 19:	Does not meet any of the three criteria
Standard 20:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 21:	Does not meet any of the three criteria
Standard 22:	Meets criteria for Depth of Knowledge and Range of Knowledge
Standard 23:	Meets the criteria for Depth of Knowledge
Standard 24:	Does not meet any of the three criteria
Standard 25:	Does not meet any of the three criteria
Standard 26:	Does not meet any of the three criteria
Standard 27:	Does not meet any of the three criteria

Tenth Grade Mathematics, Fall 2002 Instrument
Score 27 out of 81 = 33.3%

Standard 1:	Meets all three criteria.
Standard 2:	Does not meet any of the three criteria.
Standard 3:	Does not meet any of the three criteria.
Standard 4:	Meets all three criteria.
Standard 5:	Does not meet any of the three criteria.
Standard 6:	Does not meet any of the three criteria.
Standard 7:	Does not meet any of the three criteria.
Standard 8:	Meets the criteria for Depth of Knowledge and Range of Knowledge.
Standard 9:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 10:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 11:	Meets the criteria for Range of Knowledge
Standard 12:	Does not meet any of the three criteria.
Standard 13:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 14:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 15:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 16:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 17:	Meets the criteria for Range of Knowledge
Standard 18:	Does not meet any of the three criteria.
Standard 19:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 20:	Meets the criteria for Depth of Knowledge and Range of Knowledge
Standard 21:	Does not meet any of the three criteria.
Standard 22:	Meets the criteria for Depth of Knowledge and Range of Knowledge

Standard 23:	Meets the criteria for Depth of Knowledge
Standard 24:	Does not meet any of the three criteria.
Standard 25:	Does not meet any of the three criteria.
Standard 26:	Does not meet any of the three criteria.
Standard 27:	Does not meet any of the three criteria.

Mathematics Tables

297-303 MATH

Table 3.1
Grade 4 Spring 2003
Math Alignment Table

Rationale: Students write to demonstrate skill and conventions according to purpose and audience

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
297.1	**Understand and Use numbers**	**1**		**7**	**1. 6** **2. 1** **3.** **4.**	**1. 85.7%** **2. 14.3%** **3.** **4.**	**6**	**Yes**	**Yes**	**Yes** **67%**
297.1a	Read, write, order, and compare whole numbers to 1,000,000 commonly used fractions, and decimals through hundredths.	1	1,9,3,7	4	1. 4 2. 3. 4.	1.100% 2. 3. 4.	3		Yes	
297.1b	Demonstrate and apply the knowledge of whole numbers, decimal place value, and patterns of periods (hundredths to millions).	1	17	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	1		Yes	
297.1c	Determine by counting the value of a collection of bills and coins up to $100,000.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
297.1d	Use concrete materials to recognize, represent, and compare commonly used fractions.	1	15	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	1		Yes	
297.1e	Understand decimals with money through hundredths.	2	26	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	0		Yes	
297.1f	Understand and apply appropriate vocabulary.	1		0	1. 2. 3.	1. 2. 3.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
297.2	**Perform computations accurately**	**2**		**7**	**1. 3 2. 4 3. 4.**	**1.42.9% 2.57.1% 3. 4.**	**5**	**Yes**	**Yes**	**Yes 57.1%**
297.2a	Consistently and accurately add and subtract whole numbers.	2	13,31	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	1		Yes	
297.2b	Multiply and divide whole numbers.	2	12,19,30	3	1. 2 2. 1 3. 4.	1.67% 2.33% 3. 4.	2		No	
297.2c	Add and subtract fractions with like denominators (without requiring simplification).	2	24	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	1		Yes	
297.2d	Add and subtract decimals using money.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
297.2e	Instantly recall multiplication facts through 10s.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
297.2f	Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
297.2g	Use appropriate vocabulary	1	10	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	0		Yes	
297.3	**Estimate and judge reasonableness of results**	**2**		**1**	**1. 1 2.**	**1.100% 2.**	**0**	**No**	**No**	**No 33%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. **4.**	**3.** **4.**				
297.3a	Use estimation to predict computation results.	2	3	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	0		Yes	
2973b	Evaluate the reasonableness of an answer.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
297.3c	Use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
298.1	**Understand and use a variety of problem-solving skills.**	**2**		**3**	**1.** **2. 3** **3.** **4.**	**1.** **2.100%** **3.** **4.**	**5**	**No**	**Yes**	**Yes** **100%**
298.1a	Select strategies appropriate to solve a problem.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	2		No	
298.1b	Select and use appropriate operations.	2	14,39	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	2		Yes	
298.1c	Make predictions and decisions based on information.	2	28	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	1		Yes	
298.2	**Use reasoning skills to recognize problems and express them mathematically.**	**3**		**0**	**1.** **2.** **3.** **4.**	**1.** **2.** **3.** **4.**	**0**	**No**	**No**	**No** **0%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
298.2a	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning and concepts.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
298.3	**Apply appropriate technology and models to find solutions to problems.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**1**	**No**	**No**	**No 0%**
298.3a	Appropriately use a 4-function calculator to solve complex grade-level problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
298.3b	Select appropriate models to represent mathematical ideas.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
298.4	**Communicate results using appropriate terminology and methods.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**1**	**No**	**No**	**No 0%**
298.4a	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to communicate mathematical information.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
298.4b	Use appropriate vocabulary to communicate mathematical information.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
298.4c	Use appropriate notation.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
299.1	**Understand and use U.S.**	**2**		**8**	**1. 3**	**1. 37.5%**	**6**	**Yes**	**Yes**	**Yes**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	Customary and metric measurements.				**2. 5 3. 4.**	**2. 62.5% 3. 4.**				**57.1%**
299.1a	Select and use appropriate units and tools to make formal measurements in both systems (time, length, temperature, perimeter, area).	1	6,18,42	3	1. 2 2. 1 3. 4.	1.67% 2.33% 3. 4.	2		Yes	
299.1b	Apply estimation of measurement to real-world and content problems using actual measuring devices.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
299.1c	Apply understanding of relationships within the U.S. customary system.	2	32,33	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	1		Yes	
299.1d	Apply understanding of relationships within the metric system.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
299.1e	Tell time using both digital and analog clocks, to the nearest minute.	1	7,23	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.	1		Yes	
299.1f	Apply understanding of relationships to solve real-world problems related to time.	2	40	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	1		Yes	
299.1g	Use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
300.1	**Use algebraic symbolism as a tool to represent mathematical relationships.**	**2**		**3**	**1. 2. 3 3.**	**1. 2.100% 3.**	**3**	**No**	**Yes**	**No 33%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	**4.**				
300.1a	Represent vertical notation in horizontal form.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
300.1b	Write a number sentence using symbols (boxes or letters) to represent an unknown number.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
300.1c	Use symbols (<,>,=) to express relationships.	2	16,38,41	3	1. 2. 3 3. 4.	1. 2. 100% 3. 4.	2		Yes	
300.2	**Evaluate algebraic expressions.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
300.2a	Explore and use the commutative properties of addition and multiplication.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
300.3	**Solve algebraic equations and inequalities.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
300.3a	Solve missing addends and missing factor problems using inverse operations.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
301.1	**Apply concepts of size, shape, and spatial relationships.**	**2**		**5**	**1. 3 2. 2 3. 4.**	**1. 60% 2. 40% 3. 4.**	**6**	**Weak**	**No**	**No 40%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
301.1a	Identify, compare, and analyze attributes of two-and three-dimensional shapes and develop vocabulary to describe the attributes.	2	25,27	2	1. 2. 2 3. 4.	1. 2. 100% 3. 4.	1		Yes	
301.1b	Explore relationships among and properties of shapes (congruence, similarity, symmetry).	2	2,20,34	3	1. 3 2. 3. 4.	1. 100% 2. 3. 4.	3		No	
301.1c	Use concrete objects to determine perimeters of triangles, and areas and perimeters of rectangles/squares.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
301.1d	Predict and describe the results of sliding, flipping, and turning two-dimensional shapes.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
301.1e	Use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
301.2	**Apply graphing in two dimensions.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
301.2a	Apply ideas about direction and distance.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
302.1	**Understand data analysis.**	**2**		**3**	**1. 1 2. 2 3. 4.**	**1. 33% 2. 67% 3. 4.**	**3**	**No**	**Yes**	**Yes 67%**
302.1a	Read and interpret tables, charts, and graphs.	2	5,21	2	1. 1 2. 1 3.	1. 50% 2. 50% 3.	2		Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
302.1b	Explain and justify conclusions drawn from tables, charts, and graphs.	3	22	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	1		No	
302.1c	Understand and use vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
302.2	**Collect, organize, and display data.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
302.2a	Collect, order, and display data in appropriate notation in tables, charts, and graphs (bar graphs, tally charts, pictographs), in order to answer a question and/or test a hypothesis.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
302.3	**Apply simple statistical measurements.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**	**1**	**No**	**Yes**	**Yes 100%**
302.3a	Determine an average (mean) of a set of whole numbers.	2	36	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	1		Yes	
302.4	**Understand basic concepts of probability.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**	**2**	**No**	**Yes**	**Yes 100%**
302.4a	Predict, perform, and record results of simple probability experiments.	2	29	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	2		Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
302.5	**Make predictions or decisions based on data.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**	**0**	**No**	**Yes**	**Yes 50%**
302.5a	Make predictions based on simple experimental probabilities.	2	8	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	0		Yes	
302.5b	Understand and use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
303.1	**Understand the concept of functions.**	**2**		**3**	**1. 1 2. 2 3. 4.**	**1. 33% 2. 67% 3. 4.**	**4**	**No**	**Yes**	**Yes 67%**
303.1a	Extend patterns and identify a rule (function) that creates the patterns.	2	11,35	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.	2		Yes	
303.1b	Discover, describe, and extend patterns by using manipulatives and pictorial representations.	2	4	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	1		Yes	
303.1c	Understand and use vocabulary	1		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	

337-343 MATH

Table 3.2
8th Grade Math
Spring 2003

Rationale: An understanding of numbers and how they are used is necessary in the everyday world. Computational skills and procedures should be developed in context so the learner perceives them as tools for solving problems.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
337.1	**Basic Arithmetic, Estimation, and Accurate Computation.**	**2**		**7**	**1. 5 2. 2 3. 4.**	**1. 71% 2. 29% 3. 4.**	**6**	**Yes**	**No**	**Yes 100%**
337.1a	Read, write, order, and compare real numbers (integers, fractions, decimals, percents, ratios) and absolute values.	2	16,24,34	3	1. 2 2. 1 3. 4.	1.67% 2.33% 3. 4.	3		No	
337.1b	Understand and use real numbers, both rational and irrational.	2	41	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	1		No	
337.1c	Show a sense of magnitudes and relative magnitudes of real numbers (integers, fractions, decimals) using scientific notation and exponential numbers.	2	38	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.			No	
337.1d	Develop and apply number theory concepts.	2	30	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	1		Yes	
337.1e	Understand the position of real numbers on a number line.	2	36	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	1		No	
337.2	**Perform computations accurately**	**2**		**9**	**1. 2 2. 7 3. 4.**	**1.22% 2.78% 3. 4.**	**5**	**Yes**	**Yes**	**33% No**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
337.2a	Consistently and accurately add, subtract, multiply, and divide rational numbers.	2	16,25,26,31, 35,40,42	7	1. 2 2. 5 3. 4.	1.29% 2.71% 3. 4.	2		Yes	
337.2b	Instantly recall common equivalent fractions, decimals, and percents.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
337.2c	Evaluate numerical expressions using the order of operations.	2	22,28	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.	2		Yes	
337.2d	Understand and use exponents.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
337.2e	Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
337.2f	Use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
337.3	**Estimate and judge reasonableness of results**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**1**	**No**	**No**	**No 0%**
337.3a	Use estimation to predict computation results.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
3373b	Recognize when estimation is appropriate and understand the usefulness of an estimate as distinct from an exact answer.	2		0	1. 2. 3.	1. 2. 3.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
337.3c	Determine whether a given estimate is an overestimate or underestimate.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
337.3d	Use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
338	**Mathematical Reasoning and Problem Solving** Rationale: These processes are essential to all mathematics and must be incorporated in all other mathematics standards.									
338.1	**Understand and use a variety of problem-solving skills.**	**3**		**3**	**1. 2. 3 3. 4.**	**1. 2.100% 3. 4.**	**6**	**No**	**No**	**No 33%**
338.1a	Use a variety of strategies, including common mathematical formulas to compute problems drawn from real-world situations.	3	33,39,42	3	1. 2. 3 3. 4.	1. 2. 100% 3. 4.	3		No	
338.1b	Recognize pertinent information for problem solving.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	2		No	
338.1c	Make predictions and decisions based on information.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
338.2	**Use reasoning skills to recognize problems and express them mathematically.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**1**	**No**	**No**	**No 0%**
338.2a	Use a variety of methods, such as words, numbers, symbols charts, graphs, tables, diagrams, and models, to explain mathematical reasoning and concepts.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
338.2b	Apply solution ns and strategies to new problem situations.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
338.2c	Formulate conjectures and justify (short of formal proof) why they must be or seem to be true.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
338.3	**Apply appropriate technology and models to find solutions to problems.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
338.3a	Understand the purpose and capabilities of appropriate technology use as a tool to solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
338.3b	Use computer applications to display and manipulate date.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
338.3c	Select appropriate models to represent mathematical ideas.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
338.4	**Communicate results using appropriate terminology and methods.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
338.4a	Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to communicate mathematical information.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
338.4b	Use appropriate vocabulary to communicate mathematical information.	2		0	1. 2. 3.	1. 2. 3.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
338.4c	Use appropriate notation.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
339	**Concepts and principles of measurement.** Rationale: The first step in scientific investigation is understanding the measurable attributes of objects.									
339.1	**Understand and use U.S. customary and metric measurements.**	**2**		**4**	**1. 1 2. 3 3. 4.**	**1. 25% 2.75% 3. 4.**	**4**	**No**	**Yes**	**Yes 67%**
339.1a	Select and use appropriate units and tools to make formal measurements using both systems.	1	4	1	1. 1 2. 3. 4.	1. 100% 2. 3. 4.	0		Yes	
339.1b	Apply estimation of measurement to real-world and content problems using actual measuring devices.	2	27	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	1		Yes	
339.1c	Recognize the differences and relationships among measures of perimeter, area, and volume (capacity) in both systems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
339.1d	Solve problems in involving length, perimeter, area, volume (capacity), weight, mass, and temperature.	3	17	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	2		No	
339.1e	Convert unit of measurement within each system.	2	11	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	1		Yes	
339.1f	Use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
339.2	**Use algebraic symbolism as a**	**2**		**0**	**1.**	**1.**	**0**	**No**	**No**	**No**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	tool to represent mathematical relationships.				**2. 3. 4.**	**2. 3. 4.**				**0%**
339.2a	Use rates to make indirect measurements.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
339.3	**Apply the concepts of rations and proportions.**	**2**		**2**	**1. 1 2. 1 3. 4.**	**1. 50% 2.50% 3. 4.**	**1**	**No**	**Yes**	**Yes 100%**
339.3a	Understand and use proportions, ratios, and scales.	2	20,29	2	1. 1 2. 1 3. 4.	1. 50% 2.50% 3. 4.	1		Yes	
339.4	**Apply dimensional analysis.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
339.4a	Understand units and their relationship to one another and to real-world applications.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
340. Concepts and Language of Algebra Rationale: Algebra is the language of mathematics and science. Through the use of variables and operations, algebra allows students to form abstract models from contextual information.										
340.1	**Use algebraic symbolism as a tool to represent mathematical relationships.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**	**2**	**No**	**Yes**	**No 33%**
340.1a	Understand and use variables in expressions, equations, and inequalities.	2		0	1. 2.	1. 2.	1		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. 4.	3. 4.				
340.1b	Translate simple word statements and story problems into algebraic expressions and equations.	2	14	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	1		Yes	
340.1c	Use symbols (<,>, +, =,≤, ≥, ≠) to express relationships.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
340.2	**Evaluate algebraic expressions**	**2**		**3**	**1. 1 2. 3 3. 4.**	**1.33% 2.67% 3. 4.**	**2**	**No**	**Yes**	**Yes 67%**
340.2a	Understand and use the following properties in evaluation algebraic expressions: commutative, associative, identity, zero, inverse, distributive, and substitution.	2	8,13	2	1. 1 2. 1 3. 4.	1. 50% 2.50% 3. 4.	1		Yes	
340.2b	Understand and use the order of operations in evaluating basic algebraic expressions.	2	8	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	1		Yes	
340.2c	Simplify algebraic expressions	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
340.3	**Solve algebraic equations and inequalities.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**	**1**	**No**	**Yes**	**50% Yes**
340.3a	Solve one- and two-step equations and inequalities using inverse operations.	2	6	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.	1		Yes	
340.3b	Explore graphical representation to show	2		0	1.	1.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	simple linear equations.				2. 3. 4.	2. 3. 4.				
341	**Concepts and principles of Geometry** Rationale: The study of geometry helps students represent and make sense of the world by discovering relationships and developing spatial sense.									
341.1	**Apply concepts of size, shapes, and spatial relationships.**	**2**		**5**	**1. 3 2. 2 3. 4.**	**1. 60% 2. 40% 3. 4.**	**6**	**No**	**No**	**Yes 50%**
341.1a	Precisely describe, classify, and understand, relationships among types of one- two-, and three-dimensional objects using their defining properties.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	2		No	
341.1b	Construct and measure various angles and shapes using appropriate tools.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
341.1c	Understand and apply fundamental concepts, properties, and relationships among points, lines, planes, angles, and shapes.	2	12	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	2		Yes	
341.1d	Recognize and apply congruence, similarities, and symmetry of shapes.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
341.1e	Apply formulas for perimeter, circumference, and area to polygons and circles.	2	15,21	2	1. 1 2. 1 3. 4.	1. 50% 2. 50% 3. 4.	1		Yes	
341.1f	Understand the concept of surface area and volume (capacity).	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
341.1g	Explore and model the effects of reflections, translations, and rotations on various shapes.	3		0	1. 2. 3.	1. 2. 3.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
341.1h	Use appropriate vocabulary.	1	1,37	2	1. 2 2. 3. 4.	1. 100% 2. 3. 4.	0		Yes	
341.2	**Apply graphing in two dimensions.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
341.2a	Investigate right triangle geometry using the Pythagorean Theorem.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
341.3	**Apply graphing in two dimensions.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
341.3a	Use the coordinate plane as it relates to real-world applications.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
342 Data analysis Rational: With society's expanding use of data for prediction and decision making, it is important that students develop an understanding of the concepts and processes used in analyzing data.										
342.1	**Understand data analysis.**	**2**		**2**	**1. 1 2. 1 3. 4.**	**1. 50% 2. 50% 3. 4.**	**0**	**No**	**Yes**	**No 33%**
342.1a	Analyze and interpret tables, charts, and graphs (scatter plots, line graphs, bar graphs, pie charts).	2	7,18	2	1. 1 2. 1 3. 4.	1. 50% 2. 50% 3. 4.	0		Yes	
342.1b	Explain and justify conclusions drawn from	3		0	1.	1.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	tables, charts, and graphs.				2. 3. 4.	2. 3. 4.				
342.1c	Understand and use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
342.2	**Collect, organize, and display data.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**1**	**No**	**No**	**No 0%**
342.2a	Collect, organize, and display data with appropriate notation in tables, charts, and graphs (scatter plots, line graphs, bar graphs, pie charts).	2		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	
342.3	**Apply simple statistical measurements.**	**2**		**2**	**1. 1 2. 1 3. 4.**	**1. 50% 2. 50% 3. 4.**	**2**	**No**	**Yes**	**Yes 50%**
342.3a	Choose and calculate the appropriate measure of central tendency – mean, median, and mode.	2	2,23	2	1. 1 2. 1 3. 4.	1. 50% 2. 50% 3. 4.	2		Yes	
342.3b	Explore the significance of range, frequency, and informal distribution.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
342.4	**Understand basic concepts of probability**	**2**		**2**	**1. 2 2. 3. 4.**	**1. 100% 2. 3. 4.**	**1**	**No**	**No**	**Yes 67%**
342.4a	Model situations of probability using simulations.	2	3	1	1. 1 2.	1. 100% 2.	1		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. 4.	3. 4.				
342.4b	Understand and use the language of probability.	2	19	1	1. 1 2. 3. 4.	1. 100% 2. 3. 4.	0		No	
342.4c	Recognize equally likely outcomes.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
342.5	**Make predictions or decisions based on data.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**2**	**No**	**No**	**No 0%**
342.5a	Make predictions based on experimental and theoretical probabilities.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	2		No	
342.5b	Understand and use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
342.5c	Conduct statistical experiments and interpret results using tables, charts, or graphs.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
343 Functions and Mathematical Models Rationale: One of the central themes of mathematics is the study of patterns, relationships, and functions. Exploring patterns helps students develop mathematical power.										
343.1	**Understand the concept of functions.**	**3**		**2**	**1. 2. 2 3. 4.**	**1. 2. 100% 3. 4.**	**1**	**No**	**No**	**Yes 67%**
343.1a	Extend patterns and identify a rule (function) that generates the pattern using real numbers.	3	5	1	1. 2. 1	1. 2. 100%	1		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. 4.	3. 4.				
343.1b	Use functional relationships to explain how a change in one quantity results in a change in another.	3	32	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.	0		No	
343.1c	Understand and use appropriate vocabulary.	1		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
343.2	**Represent equations, inequalities, and functions in a variety of formats.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
343.2a	Represent a ser of data in a table, as a graph, and as a mathematical relationship.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
343.3	**Apply functions to a variety of problems.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
343.3a	Use patterns and functions to represent and solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	

Table 3.3

347-355 MATH
Grade 9-12

Tenth Grade Spring 2002
Math Alignment Table

Rationale: An understanding of numbers and how they are used is necessary in the everyday world. Computational skills and procedures should be developed in context so the learner perceives them as tools for solving problems.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
347.1	**Understand and use numbers**	**2**		**13**	**1. 8 2. 5 3. 4.**	**1. 61.5% 2. 48.5% 3. 4.**		**Yes**	**Weak**	**Yes 100%**
347.1a	Understand and use positive and negative numbers, fractions, decimals, percentages, and scientific notation.	2	11, 16, 52, 54, 58, 59, 60	7	1. 4 2. 3 3. 4.	1.57% 2.43 3. 4.			Weak	
347.1b	Understand properties of the real number system.	2	8, 28, 47	3	1. 3 2. 3. 4.	1.100% 2. 3. 4.			No	
347.1c	Understand properties of roots, exponents, and logarithms.	2	56	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
347.1d	Use number theory concepts (divisibility rules, factors, multiples, primes) to solve problems.	2	51, 57	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.			Yes	
347.2	**Perform computations accurately**	**2**		**2**	**1. 2. 2 3.**	**1. 2.100% 3.**		**No**	**Yes**	**Yes 50%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	**4.**				
347.2a	Use the proper order of operations. Perform operations with real numbers.	2	48, 50	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
347.2b	Use graphs, matrices, and sequences to represent and solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
347.3	**Estimate and judge reasonableness of results**	**2**		**2**	**1. 1** **2. 1** **3.** **4.**	**1.50%** **2.50%** **3.** **4.**		**No**	**Yes**	**Yes 100%**
347.3a	Apply number sense to every day situations.	2	17, 55	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.			Yes	
348. Mathematical reasoning and problem solving. Rationale: These processes are essential to all mathematics and must be incorporated in all other mathematics standards.										
348.1	**Understand and use a variety of problem-solving skills.**	**2**		**5**	**1. 1** **2. 4** **3.** **4.**	**1.20%** **2.80%** **3.** **4.**		**No**	**Yes**	**Yes 100%**
348.1a	Use a variety of methods, including common mathematical formulas, to solve problems drawn from daily life.	2	3, 4, 5, 6, 24	5	1. 1 2. 4 3. 4.	1. 20% 2. 80% 3. 4.			Yes	
348.2	**Use reasoning skills to recognize**	**3**		**0**	**1.**	**1.**		**No**	**No**	**No**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	problems and express them mathematically.				**2. 3. 4.**	**2. 3. 4.**				**0%**
348.2a	Use inductive and deductive reasoning to set up a problem.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.2b	Use logic to make mathematical proofs.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.2c	Make and evaluate logical arguments.	3	22	0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.3	Apply appropriate technology and models to find solutions to problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.		No	No	No 0%
348.3a	Understand the purpose and capabilities of appropriate technology.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.3b	Understand the nature and use of mathematical models.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.4	**Communicate results using appropriate terminology and methods.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No'0%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
348.4a	Select the appropriate means to communicate mathematical information.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
349. Concepts and principles of measurement. Rationale: The first step in scientific investigation is to understand the measurable attributes of objects.										
349.1	**Understand and use U.S. customary and metric measurements.**	**1**		**2**	**1. 2. 2 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**
349.1a	Determine length, area, capacity, weight, time, and temperature, with appropriate units.	1	1, 21,	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
349.2	**Apply concepts of rates and other derived or indirect measurements.**	**2**		**2**	**1. 2 2. 3. 4.**	**1. 100% 2. 3. 4.**		**No**	**No**	**Yes 100%**
349.2a	Understand equivalent units, comparable units, and conversions.	2	11, 28	2	1. 2 2. 3. 4.	1.100% 2. 3. 4.			No	
349.3	**Apply the concepts of ratios and proportions.**	**2**		**2**	**1. 1 2. 1 3. 4.**	**1.50% 2.50% 3. 4.**		**No**	**Yes**	**Yes 100%**
349.3a	Understand and use proportions, ratios, and scaling.	2	24, 30	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.			Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
349.4	**Apply dimensional analysis.**	**2**		**1**	**1.1 2. 3. 4.**	**1.100% 2. 3. 4.**		**No**	**No**	**Yes 100%**
349.4a	Understand units and their relationship to one another and to real world applications.	2	3	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.			No	
349.5	**Perform error analysis.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
349.5a	Understand tolerance, precision, and their applications.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
349.5b	Understand that error accumulates in a computation when there is rounding at intermediate steps.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
350. Concepts and language of algebra. Rationale: Algebra is the language of mathematics and science. Through the use of variables and operations, algebra allows students to form abstract models from contextual information.										
350.1	**Use algebraic symbolism as a tool to represent mathematical relationships.**	**2**		**3**	**1. 1 2. 2 3. 4.**	**1. 33% 2. 67% 3. 4.**		**No**	**Yes**	**Yes 100T**
350.1a	Understand and use variables, expressions, Equations and inequalities.	2	14, 33, 34	3	1. 1 2. 2 3. 4.	1.33% 2.67% 3. 4.			Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
350.2	**Evaluate algebraic expressions.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
350.2a	Understand and use procedures for operating on algebraic expressions.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
350.3	**Solve algebraic equations and inequalities.**	**2**		**4**	**1. 1 2. 3 3. 4.**	**1.25% 2.75% 3. 4.**		**No**	**Yes**	**Yes 50%**
350.3a	Understand and use appropriate procedures to solve linear equations and inequalities such as: $3x - 4 = 2$ or $3x - 4 > 2.$	2	21, 34, 35, 41	4	1. 1 2. 3 3. 4.	1.25% 2.75% 3. 4.			Yes	
350.3b	Use appropriate procedures to simplify and solve polynomial equations and inequalities such as: $x^2 + 3x = 7$ or $x^2 + 3x \leq 7$	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
350.4	**Solve simple linear systems of equations or inequalities.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**
350.4a	Understand and use appropriate procedures to solve simple linear systems of equations and inequalities such as: $x + y = 7$	2	43	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	$2x + 3y = 21$ or $x + y < 7$ $2x + 3y \geq 21$									
351. Concepts and principles of geometry. Rationale: The study of geometry helps students represent and make sense of the world by discovering relationships and developing spatial sense.										
351.1	**Apply concepts of size, shapes, and spatial relationships.**	**2**		**2**	**1. 2 2. 3. 4.**	**1. 100% 2. 3. 4.**		**No**	**No**	**Yes 100%**
351.1a	Understand congruence and similarity as they apply to reflection, rotation, and translation.	2	23	1	1. 1 2. 3. 4.	1. 100% 2. 3. 4.			No	
351.1b	Understand scaling as it relates to size variations in one, two, and three- dimensional objects, while shape is maintained.	2	9	1	1. 1 2. 3. 4.	1. 100% 2. 3. 4.			No	
351.2	**Apply the geometry of right triangles.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**		**No**	**Ys**	**No 33%**
351.2a	Understand the basic concepts of right triangle trigonometry (basic trigonometry ratios such as sine, cosine, and tangent).	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.2b	Use trigonometric ration methods to solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.2c	Know and apply the Pythagorean Theorem to	2	38	1	1.	1.			Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	solve real world problems.				2. 1 3. 4.	2. 100% 3. 4.				
351.3	**Apply graphing in tow dimensions.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
351.3a	Understand concepts of the Cartesian Coordinate System.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.3b	Understand the characteristics and uses of vectors.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352. Data analysis, probability, and statistics. Rationale: With society's expanding use of data for prediction and decision-making, it is important that students develop an understanding of the concepts and processes used in analyzing data.										
352.1	**Understand data analysis.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**		**NO**	**Yes**	**Yes 100%**
352.1a	Read and interpret tables, charts, and graphs (scatter plots, line graphs, three-dimensional graphs, and pie charts).	2	29	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.			Yes	
352.2	**Collect, organize, and display data.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**NO**	**No**	**No 0%**
352.2a	Collect and organize data, and display the data in tables, charts, and graphs (scatter diagrams,	2		0	1. 2.	1. 2.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	frequency tables, bar graphs, or pie charts).				3. 4.	3. 4.				
352.3	**Apply simple statistical measurements.**	**2**		**4**	**1. 2. 4 3. 4.**	**1. 2. 100% 3. 4.**		**No**	**Yes**	**Yes 100%**
352.3a	Understand basic statistical concepts including mean (average), median, mode, range, and standard deviation.	2	17, 25, 31, 44	4	1. 2. 4 3. 4.	1. 2. 100% 3. 4.				No 33%
352.4	**Understand basic concepts of probability**	**2**		**3**	**1. 2. 3 3. 4.**	**1. 2. 100% 3. 4.**		**No**	**Yes**	**No 33%**
352.4a	Understand experimental and theoretical probability.	2	7, 39, 46	3	1. 2. 3 3. 4.	1. 2. 100% 3. 4.			Yes	
352.4b	Distinguish between independent and dependent events.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.4c	Know that probability ranges from 0% to 100%. Understand randomness and chance.	1		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5	**Make predictions or decisions based on data.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%0**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
352.5a	Use appropriate technology to employ simulation techniques, curve fitting, correlation, and graphical models to make predictions or decisions based on data.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5b	Design, conduct, and interpret results of statistical experiments.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5c	Analyze the effect of biased data on statistical predictions.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
353. Functions and mathematical models. Rationale: One of the central themes of mathematics is the study of patterns, relationships, and functions. Exploring patterns helps students develop mathematical power.										
353.1	Understand the concept of functions.	2		0	1. 2. 3. 4.	1. 2. 3. 4.		No	No	No 0%
353.1a	Solve problems that involve varying quantities with variables, expressions, equations, inequalities, and absolute values.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
353.2	**Represent equations, inequalities and functions in a variety of formats.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
353.2a	Represent a set of data in a table, a graph, and as a mathematical relationship.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
353.3	**Apply functions to a variety of problems.**	**2**		**0**	**1. 2.**	**1. 2.**		**No**	**No**	**No 0%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. **4.**	**3.** **4.**				
353.3a	Model real-world phenomena using polynomial, rational, and basic exponential functions, noting restricted domains.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Table 3.4

347-354 MATH
Grade 9-12

Fall 2002
Math Alignment Table

Rationale: An understanding of numbers and how they are used is necessary in the everyday world. Computational skills and procedures should be developed in context so the learner perceives them as tools for solving problems.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
347.1	**Understand and use numbers**	**2**		**13**	**1. 4 2. 9 3. 4.**	**1.31% 2. 69% 3. 4.**		**Yes**	**Yes**	**Yes 100%**
347.1a	Understand and use positive and negative numbers, fractions, decimals, percentages, and scientific notation.	2	12, 38, 48, 51, 54, 60	6	1. 2 2. 4 3. 4.	1.33% 2.67% 3. 4.			Yes	
347.1b	Understand properties of the real number system.	2	2, 13, 38	3	1. 1 2. 2 3. 4.	1.33% 2.67% 3. 4.			Yes	
347.1c	Understand properties of roots, exponents, and logarithms.	2	49, 50	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.			Yes	
347.1d	Use number theory concepts (divisibility rules, factors, multiples, primes) to solve problems.	2	52, 56	2	1. 2. 2 3. 4.	1. 2100% 3. 4.			Yes	
347.2	**Perform computations accurately**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**No**	**No**	**No`**	**No**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
347.2a	Use the proper order of operations. Perform operations with real numbers.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
347.2b	Use graphs, matrices, and sequences to represent and solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
347.3	**Estimate and judge reasonableness of results**	**2**		**1**	**1. 1** **2.** **3.** **4.**	**1.100%** **2.** **3.** **4.**		**No**	**No**	**No 100%**
347.3a	Apply number sense to every day situations.	2	59	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.			No	
348. Mathematical reasoning and problem solving. Rationale: These processes are essential to all mathematics and must be incorporated in all other mathematics standards.										
348.1	**Understand and use a variety of problem-solving skills.**	**2**	**6, 7, 8, 10, 14, 19, 30, 31, 32, 36, 37, 44, 45, 46**	**14**	**1.** **2. 14** **3.** **4.**	**1.** **2.100%** **3.** **4.**		**Yes**	**Yes**	**Yes 100%**
348.1a	Use a variety of methods, including common mathematical formulas, to solve problems drawn from daily life.	2		14	1. 2. 14 3. 4.	1. 2. 100% 3. 4.			Yes	
348.2	**Use reasoning skills to recognize problems and**	**3**		**1**	**1.** **2. 1**	**1.** **2.100%**		**No**	**No**	**No 33%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	express them mathematically.				**3. 4.**	**3. 4.**				
348.2a	Use inductive and deductive reasoning to set up a problem.	3	22	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			No	
348.2b	Use logic to make mathematical proofs.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.2c	Make and evaluate logical arguments.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.3	**Apply appropriate technology and models to find solutions to problems.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No**
348.3a	Understand the purpose and capabilities of appropriate technology.	2			1. 2. 3. 4.	1. 2. 3. 4.			No	
No348.3b	Understand the nature and use of mathematical models.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.4	**Communicate results using appropriate terminology and methods.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No**
348.4a	Select the appropriate means to communicate mathematical information.	2		0	1. 2. 3.	1. 2. 3.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					4.	4.				
349. Concepts and principles of measurement. Rationale: The first step in scientific investigation is to understand the measurable attributes of objects.										
349.1	**Understand and use U.S. customary and metric measurements.**	**1**		**4**	**1. 1 2. 3 3. 4.**	**1.25% 2.75% 3. 4.**		**No**	**Yes**	**Yes 100%**
349.1a	Determine length, area, capacity, weight, time, and temperature, with appropriate units.	1	1, 15, 21, 37	4	1. 1 2. 3 3. 4.	1.25% 2.75% 3. 4.			Yes	
349.2	**Apply concepts of rates and other derived or indirect measurements.**	**2**		**2**	**1. 2. 2 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**
349.2a	Understand equivalent units, comparable units, and conversions.	2	11, 28	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
349.3	**Apply the concepts of ratios and proportions.**	**2**		**2**	**1. 2. 2 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**
349.3a	Understand and use proportions, ratios, and scaling.	2	24, 30	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
349.4	**Apply dimensional analysis.**	**2**		**1**	**1.1 2. 3. 4.**	**1.100% 2. 3. 4.**		**No**	**No**	**Yes 100%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
349.4a	Understand units and their relationship to one another and to real world applications.	2	3	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.			No	
349.5	**Perform error analysis.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No**
349.5a	Understand tolerance, precision, and their applications.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
349.5b	Understand that error accumulates in a computation when there is rounding at intermediate steps.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
350. Concepts and language of algebra. Rationale: Algebra is the language of mathematics and science. Through the use of variables and operations, algebra allows students to form abstract models from contextual information.										
350.1	**Use algebraic symbolism as a tool to represent mathematical relationships.**	**2**		**4**	**1. 1 2. 3 3. 4.**	**1. 25% 2. 75% 3. 4.**		**No**	**Yes**	**Yes 100%**
350.1a	Understand and use variables, expressions, Equations and inequalities.	2	5, 16, 42, 43	4	1. 1 2. 3 3. 4.	1.25% 2.75% 3. 4.			Yes	
350.2	**Evaluate algebraic expressions.**	**2**		**2**	**1. 2. 2 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**
350.2a	Understand and use procedures for operating on algebraic expressions.	2	29, 54	2	1. 2. 2	1. 2.100%			Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. 4.	3. 4.				
350.3	**Solve algebraic equations and inequalities.**	**2**		**4**	**1. 2. 4 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**
350.3a	Understand and use appropriate procedures to solve linear equations and inequalities such as: $3x - 4 = 2$ or $3x - 4 > 2$.	2	25, 44	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
350.3b	Use appropriate procedures to simplify and solve polynomial equations and inequalities such as: $x^2 + 3x = 7$ or $x^2 + 3x \leq 7$	2	35, 40	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
350.4	**Solve simple linear systems of equations or inequalities.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**
350.4a	Understand and use appropriate procedures to solve simple linear systems of equations and inequalities such as: $x + y = 7$ $2x + 3y = 21$ or $x + y < 7$ $2x + 3y \geq 21$	2	39	1	1. 2. 1 3. 4.	1. 2.100 3. 4.			Yes	
351. Concepts and principles of geometry. Rationale: The study of geometry helps students represent and make sense of the world by discovering relationships and developing spatial sense.										
351.1	**Apply concepts of size, shapes,**	**2**		**2**	**1. 2**	**1. 100%**		**No**	**No**	**Yes**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	and spatial relationships.				**2. 3. 4.**	**2. 3. 4.**				**50%**
351.1a	Understand congruence and similarity as they apply to reflection, rotation, and translation.	2	4, 27	2	1. 2 2. 3. 4.	1. 100% 2. 3. 4.			No	
351.1b	Understand scaling as it relates to size variations in one, two, and three-dimensional objects, while shape is maintained.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.2	**Apply the geometry of right triangles.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
351.2a	Understand the basic concepts of right triangle trigonometry (basic trigonometry ratios such as sine, cosine, and tangent).	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.2b	Use trigonometric ration methods to solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.2c	Know and apply the Pythagorean Theorem to solve real world problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.3	**Apply graphing in tow dimensions.**	**2**		**2**	**1. 1 2. 1 3. 4.**	**1. 50% 2. 50% 3. 4.**		**No**	**Yes**	**Yes 50%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
351.3a	Understand concepts of the Cartesian Coordinate System.	2	34, 55	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.			Yes	
351.3b	Understand the characteristics and uses of vectors.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352. Data analysis, probability, and statistics. Rationale: With society's expanding use of data for prediction and decision-making, it is important that students develop an understanding of the concepts and processes used in analyzing data.										
352.1	**Understand data analysis.**	**2**		**2**	**1. 1 2. 1 3. 4.**	**1. 50% 2. 50% 3. 4.**		**No**	**Yes**	**Yes 100%**
352.1a	Read and interpret tables, charts, and graphs (scatter plots, line graphs, three-dimensional graphs, and pie charts).	2	17, 47	2	1. 1 2. 1 3. 4.	1. 50% 2. 50% 3. 4.			Yes	
352.2	**Collect, organize, and display data.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
352.2a	Collect and organize data, and display the data in tables, charts, and graphs (scatter diagrams, frequency tables, bar graphs, or pie charts).	2		0	1. 2. 3. 4.	1. 2. 3. 4.			NO	
352.3	**Apply simple statistical measurements.**	**2**		**4**	**1. 2. 4 3. 4.**	**1. 2.100% 3. 4.**		**No**	**Yes**	**Yes 100%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
352.3a	Understand basic statistical concepts including mean (average), median, mode, range, and standard deviation.	2	20, 26, 41, 53	4	1. 2. 4 3. 4.	1. 2. 100% 3. 4.			Yes	
352.4	**Understand basic concepts of probability**	**2**		**3**	**1. 1 2. 2 3. 4.**	**1. 33% 2. 67% 3. 4.**		**No**	**Yes**	**No 30%**
352.4a	Understand experimental and theoretical probability.	2	9, 33, 58	3	1. 1 2. 2 3. 4.	1. 33% 2. 67% 3. 4.			No	
352.4b	Distinguish between independent and dependent events.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.4c	Know that probability ranges from 0% to 100%. Understand randomness and chance.	1		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5	**Make predictions or decisions based on data.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
352.5a	Use appropriate technology to employ simulation techniques, curve fitting, correlation, and graphical models to make predictions or decisions based on data.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5b	Design, conduct, and interpret results of statistical experiments.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5c	Analyze the effect of biased data on statistical predictions.	3		0	1. 2.	1. 2.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. 4.	3. 4.				
353. Functions and mathematical models. Rationale: One of the central themes of mathematics is the study of patterns, relationships, and functions. Exploring patterns helps students develop mathematical power.										
353.1	**Understand the concept of functions.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
353.1a	Solve problems that involve varying quantities with variables, expressions, equations, inequalities, and absolute values.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
353.2	**Represent equations, inequalities and functions in a variety of formats.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
353.2a	Represent a set of data in a table, a graph, and as a mathematical relationship.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
353.3	**Apply functions to a variety of problems.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
353.3a	Model real-world phenomena using polynomial, rational, and basic exponential functions, noting restricted domains.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Table 3.5

347-353 MATH
Grade 9-12

Tenth Grade Spring 2003
Math Alignment Table

Rationale: An understanding of numbers and how they are used is necessary in the everyday world. Computational skills and procedures should be developed in context so the learner perceives them as tools for solving problems.

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
347.1	**Understand and use numbers**	**2**		**12**	**1. 2 2. 10 3. 4.**	**1. 16.7% 2. 88.3% 3. 4.**	**10**	**Yes**	**Yes**	**Yes 100%**
347.1a	Understand and use positive and negative numbers, fractions, decimals, percentages, and scientific notation.	2	6, 23, 51, 53, 57, 58	6	1. 2. 6 3. 4.	1. 2.100% 3. 4.			Yes	
347.1b	Understand properties of the real number system.	2	32	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.			No	
347.1c	Understand properties of roots, exponents, and logarithms.	2	5, 48, 49, 52	4	1. 1 2. 3 3. 4.	1.25 2.75 3. 4.			Yes	
347.1d	Use number theory concepts (divisibility rules, factors, multiples, primes) to solve problems.	2	56	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
347.2	**Perform computations accurately**	**2**		**2**	**1. 2. 2 3. 4.**	**1. 2.100% 3. 4.**	**1**	**No**	**Yes**	**Yes 50%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
347.2a	Use the proper order of operations. Perform operations with real numbers.	2	33, 60	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
347.2b	Use graphs, matrices, and sequences to represent and solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
347.3	**Estimate and judge reasonableness of results**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
347.3a	Apply number sense to every day situations.	2	5	0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348. Mathematical reasoning and problem solving. Rationale: These processes are essential to all mathematics and must be incorporated in all other mathematics standards.										
348.1	**Understand and use a variety of problem-solving skills.**	**2**		**5**	**1. 2. 5 3. 4.**	**1. 2.100% 3. 4.**	**2**	**No**	**Yes**	**Yes 100%**
348.1a	Use a variety of methods, including common mathematical formulas, to solve problems drawn from daily life.	2	29, 42, 43, 47, 54	5	1. 2. 5 3. 4.	1. 2. 100% 3. 4.			Yes	
348.2	**Use reasoning skills to recognize problems and express them mathematically.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**2**	**No**	**No**	**No 0%**
348.2a	Use inductive and deductive reasoning to set	3		0	1.	1.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	up a problem.				2. 3. 4.	2. 3. 4.				
348.2b	Use logic to make mathematical proofs.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.2c	Make and evaluate logical arguments.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.3	**Apply appropriate technology and models to find solutions to problems.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**2**	**No**	**No**	**No 0%**
348.3a	Understand the purpose and capabilities of appropriate technology.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.3b	Understand the nature and use of mathematical models.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
348.4	**Communicate results using appropriate terminology and methods.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**1**	**No**	**No**	**No 0%**
348.4a	Select the appropriate means to communicate mathematical information.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
349. Concepts and principles of measurement. Rationale: The first step in scientific investigation is to understand the measurable attributes of objects.										
349.1	**Understand and use U.S.**	**1**		**3**	**1.**	**1.**	**3**	**No**	**Yes**	**Yes**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	customary and metric measurements.				**2. 3 3. 4.**	**2.100% 3. 4.**				**100%**
349.1a	Determine length, area, capacity, weight, time, and temperature, with appropriate units.	1	1, 7, 50	3	1. 2. 3 3. 4.	1. 2.100% 3. 4.			Yes	
349.2	**Apply concepts of rates and other derived or indirect measurements.**	**2**		**3**	**1. 1 2. 2 3. 4.**	**1. 33% 2. 67% 3. 4.**	**2**	**No**	**Yes**	**Yes 100%**
349.2a	Understand equivalent units, comparable units, and conversions.	2	10, 15, 40	3	1. 1 2. 2 3. 4.	1.33% 2.67% 3. 4.			Yes	
349.3	**Apply the concepts of ratios and proportions.**	**2**		**3**	**1. 2. 3 3. 4.**	**1. 2.100% 3. 4.**	**2**	**No**	**Yes**	**Yes 100%**
349.3a	Understand and use proportions, ratios, and scaling.	2	4, 11, 13	3	1. 2. 3 3. 4.	1. 2.100% 3. 4.			Yes	
349.4	**Apply dimensional analysis.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
349.4a	Understand units and their relationship to one another and to real world applications.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
349.5	**Perform error analysis.**	**3**		**1**	**1. 2. 1 3. 4.**	**1. 2.100% 3. 4.**		**No**	**No**	**Yes 50%**
349.5a	Understand tolerance, precision, and their applications.	3	20	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			No	
349.5b	Understand that error accumulates in a computation when there is rounding at intermediate steps.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
350. Concepts and language of algebra. Rationale: Algebra is the language of mathematics and science. Through the use of variables and operations, algebra allows students to form abstract models from contextual information.										
350.1	**Use algebraic symbolism as a tool to represent mathematical relationships.**	**2**		**4**	**1. 1 2. 3 3. 4.**	**1. 25% 2. 75% 3. 4.**	**1**	**No**	**Yes**	**Yes 100%**
350.1a	Understand and use variables, expressions, Equations and inequalities.	2	2, 12, 37, 38	4	1. 1 2. 3 3. 4.	1.25% 2.75% 3. 4.			Yes	
350.2	**Evaluate algebraic expressions.**	**2**		**6**	**1. 2. 6 3. 4.**	**1. 2.100% 3. 4.**	**4**	**Yes**	**Yes**	**Yes 100%**
350.2a	Understand and use procedures for operating on algebraic expressions.	2	9, 17, 18, 28, 31, 34	6	1. 2. 6 3. 4.	1. 2.100% 3. 4.			Yes	
350.3	**Solve algebraic equations and inequalities.**	**2**		**5**	**1. 2. 5**	**1. 2.100%**	**3**	**No**	**Yes**	**Yes 100%**

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. **4.**	**3.** **4.**				
350.3a	Understand and use appropriate procedures to solve linear equations and inequalities such as: $3x - 4 = 2$ or $3x - 4 > 2$.	2	26, 37, 42, 44	4	1. 2. 4 3. 4.	1. 2.100% 3. 4.			Yes	
350.3b	Use appropriate procedures to simplify and solve polynomial equations and inequalities such as: $x^2 + 3x = 7$ or $x^2 + 3x \leq 7$	2	39	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
350.4	**Solve simple linear systems of equations or inequalities.**	**2**		**1**	**1.** **2. 1** **3.** **4.**	**1.** **2.100%** **3.** **4.**	**2**	**No**	**Yes**	**Yes 100%**
350.4a	Understand and use appropriate procedures to solve simple linear systems of equations and inequalities such as: $x + y = 7$ $2x + 3y = 21$ or $x + y < 7$ $2x + 3y \geq 21$	2	19	1	1. 2. 1 3. 4.	1. 2.100% 3. 4.			Yes	
351. Concepts and principles of geometry. Rationale: The study of geometry helps students represent and make sense of the world by discovering relationships and developing spatial sense.										
351.1	**Apply concepts of size, shapes, and spatial relationships.**	**2**		**3**	**1. 2** **2. 1** **3.** **4.**	**1. 67%** **2. 33%** **3.** **4.**	**5**	**No**	**No**	**Yes 100%**
351.1a	Understand congruence and similarity as they apply to reflection, rotation, and translation.	2	35, 36	2	1. 2 2.	1. 100% 2.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
					3. 4.	3. 4.				
351.1b	Understand scaling as it relates to size variations in one, two, and three- dimensional objects, while shape is maintained.	2	55	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.			Yes	
351.2	**Apply the geometry of right triangles.**	**2**		**3**	**1. 2 2. 1 3. 4.**	**1. 67% 2. 23% 3. 4.**	**3**	**No**	**No**	**Yes 67%**
351.2a	Understand the basic concepts of right triangle trigonometry (basic trigonometry ratios such as sine, cosine, and tangent).	2	41, 45	2	1. 2 2. 3. 4.	1. 100% 2. 3. 4.			No	
351.2b	Use trigonometric ration methods to solve problems.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
351.2c	Know and apply the Pythagorean Theorem to solve real world problems.	2	27	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.			Yes	
351.3	**Apply graphing in tow dimensions.**	**2**		**2**	**1. 2. 2 3. 4.**	**1. 2. 100% 3. 4.**		**No**	**Yes**	**Yes 50%**
351.3a	Understand concepts of the Cartesian Coordinate System.	2	14, 25	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
351.3b	Understand the characteristics and uses of vectors.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
352. Data analysis, probability, and statistics. Rationale: With society's expanding use of data for prediction and decision-making, it is important that students develop an understanding of the concepts and processes used in analyzing data.										
352.1	**Understand data analysis.**	**2**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**	**1**	**No**	**Yes**	**Yes 100%**
352.1a	Read and interpret tables, charts, and graphs (scatter plots, line graphs, three-dimensional graphs, and pie charts).	2	6	1	1. 2. 1 3. 4.	1. 2. 100% 3. 4.			Yes	
352.2	**Collect, organize, and display data.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**1**	**No**	**No**	**No 0%**
352.2a	Collect and organize data, and display the data in tables, charts, and graphs (scatter diagrams, frequency tables, bar graphs, or pie charts).	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.3	**Apply simple statistical measurements.**	**2**		**2**	**1. 2. 2 3. 4.**	**1. 2. 100% 3. 4.**	**3**	**No**	**Yes**	**Yes 100%**
352.3a	Understand basic statistical concepts including mean (average), median, mode, range, and standard deviation.	2	8, 16	2	1. 2. 2 3. 4.	1. 2. 100% 3. 4.			Yes	
352.4	**Understand basic concepts of probability**	**2**		**3**	**1. 2 2. 1 3. 4.**	**1. 67% 2. 33% 3. 4.**	**3**	**No**	**No**	**No 33%**
352.4a	Understand experimental and theoretical	2	3, 24, 59	3	1. 2	1. 67%			Yes	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	probability.				2. 1 3. 4.	2. 33% 3. 4.				
352.4b	Distinguish between independent and dependent events.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.4c	Know that probability ranges from 0% to 100%. Understand randomness and chance.	1		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5	**Make predictions or decisions based on data.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No %**
352.5a	Use appropriate technology to employ simulation techniques, curve fitting, correlation, and graphical models to make predictions or decisions based on data.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5b	Design, conduct, and interpret results of statistical experiments.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
352.5c	Analyze the effect of biased data on statistical predictions.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
353. Functions and mathematical models. Rationale: One of the central themes of mathematics is the study of patterns, relationships, and functions. Exploring patterns helps students develop mathematical power.										
353.1	**Understand the concept of functions.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**5**	**No**	**No**	**No 0%**
353.1a	Solve problems that involve varying quantities with variables, expressions, equations,	2		0	1. 2.	1. 2.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	inequalities, and absolute values.				3. 4.	3. 4.				
353.2	**Represent equations, inequalities and functions in a variety of formats.**	**2**		**2**	**1. 2. 2 3. 4.**	**1. 2. 100% 3. 4.**	**3**	**No**	**Yes**	**Yes 100%**
353.2a	Represent a set of data in a table, a graph, and as a mathematical relationship.	2	12, 14	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			Yes	
353.3	**Apply functions to a variety of problems.**	**2**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
353.3a	Model real-world phenomena using polynomial, rational, and basic exponential functions, noting restricted domains.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

SECTION 4
LANGUAGE ARTS

Language Arts Findings and Conclusions

Comments:

NWEA aligned items/tasks in the Spring 2003 instrument to Idaho state standards. The eighth column in the Alignment Tables 2.1 through 2.5 "NWEA #s items presents the number of items" aligned per Content Knowledge and Skills Objectives and Idaho Standards. While the numbers are different from those assigned by NWREL, the proportions are very similar. Again, NWREL aligned a single item/task with up to a maximum of three Content Knowledge and Skills Objectives while NWEA only aligned a single item with a single objective.

Idaho may wish to consider limiting its use of the alignment results in the area of Language Arts especially with regard to meeting NCLB requirements.

Also, it must be stated that there is in fact a large disconnect between the Idaho Standards and the ISAT in this content area. Idaho has standards in "Language Arts/Communications." In fact these are broken down (in addition to reading) to include 1) writing, 2) listening, 3) speaking and 4) viewing. This alignment has only attempted to align ISAT Language Arts assessment task/items to the area of writing, as one would expect little if any alignment to the areas of listening, speaking and viewing. However the correlation to a more general/grammatical version of language arts (as on the ISAT) and the specific task of writing (as in the Idaho standards) is weak.

Of the three tenth grade instruments (Spring 2002, Fall 2002, and Spring 2003) the Spring 2003 appears to be the weakest of the three in relation to meeting the 3 criteria (Categorical Concurrence, Depth of Knowledge, and Range of Knowledge) for each of the standards. The Spring 2003 Eighth grade instrument also appears to be weak across these three criteria.

Figure 4.0 shows the distribution of assessment items/tasks across the Language Arts standards for each of the five instruments for which alignment was conducted. Across all grade levels, the preponderance of items are those that address the second standard – essentially conventions (punctuation, grammar, capitalization, spelling, etc.) at all three grade levels.

One or more items/tasks refer to specific parts of the writing process, as described in the Content Knowledge and Skills portion of the Idaho standards document (example: 708.1a – "Demonstrate understanding and application of writing process: Brainstorm,; Draft; Revise; Edit; Publish"), however, the terminology used on the test items and that used in the Standards document does not match. Whether this difference in terminology has any effect on student responses is questionable – most likely the degree of the effect would be dependent on the consistency with which these terms are used across the state.

Table 4.0
Comparison of Number of Items Per Standard in Language Arts Instruments

Standard No.	Number of Items Grade 4 Spring 2003	Number of Items Grade 8 Spring 2003	Number of Items Grade 10 Spring 2003	Number of Items Grade 10 Fall 2002	Number of Items Grade 10 Spring 2002
1	12	8	5	2	7
2	30	31	47	54	51
3	1	0	5	7	2
4		1	0	0	0
5		1	0	0	0
6		2	1	0	2
7		0			
Total	43	43	58	63	62

Findings By Standard

[The Score number on each of the instruments below is an attempt to summarize the findings across the three criteria. The total possible is the number of standards multiplied by three (the number of criteria). That ratio is then converted to a percentage to allow comparison across grades.]

Fourth Grade Language Arts, Spring 2003 Instrument
Score 5 out of 9 = 55.6%

Standard 1	Meets criteria for Categorical Concurrence and Range of Knowledge. This standard is rated at a level 4 for Depth of Knowledge which makes it virtually impossible to meet the criteria for Depth of Knowledge.
Standard 2	Meets criteria for Categorical Concurrence and Range of Knowledge
Standard 3	Meets criteria for Range of Knowledge, with 1 aligned item.

Eighth Grade Language Arts, Spring 2003 Instrument
Score 5 out of 21 = 23%

Standard 1	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 2	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 3	Does not meet any of the three criteria, with no aligned items.
Standard 4	Does not meet any of the three criteria, with no aligned items.
Standard 5	Does not meet any of the three criteria, with one aligned item.
Standard 6	Meets criteria for Range of Knowledge, with two aligned items.
Standard 7	Does not meet any of the three criteria, with no aligned items.

Tenth Grade Language Arts, Spring 2003 Instrument
Score 4 out of 18 = 22.2%

Standard 1	Meets criteria for Range of Knowledge
Standard 2	Meets criteria for Categorical Concurrence and Range of Knowledge
Standard 3	Meets criteria for Range of Knowledge
Standard 4	Does not meet any of the three criteria, with no aligned items.
Standard 5	Does not meet any of the three criteria, with no aligned items.
Standard 6	Does not meet any of the three criteria, with one aligned item.

Tenth Grade Language Arts, Fall 2002 Instrument
Score 5 out of 18 = 27.8%

Standard 1	Meets criteria for Range of Knowledge.
Standard 2	Meets criteria for Categorical Concurrence and Range of Knowledge
Standard 3	Meets criteria for Categorical Concurrence and Range of Knowledge
Standard 4	Does not meet any of the three criteria, with no aligned items.
Standard 5	Does not meet any of the three criteria, with no aligned items.
Standard 6	Does not meet any of the three criteria, with no aligned items.

Tenth Grade Language Arts, Spring 2002 Instrument
Score 6 out of 18 = 33.3%

Standard 1	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 2	Meets criteria for Categorical Concurrence and Range of Knowledge.
Standard 3	Meets criteria for Range of Knowledge.
Standard 4	Does not meet any of the three criteria, with no aligned items.
Standard 5	Does not meet any of the three criteria, with no aligned items.
Standard 6	Meets the criteria for Range of Knowledge.

Language Arts Tables

708: Writing

Table 4.1
Grade 4 Language arts/Writing Spring 2003
Alignment Table

Rationale: Students write to demonstrate skill and conventions according to purpose and audience

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
708.1	**Understand and use the writing process**	**4**		**12**	**1. 11 2. 1 3. 4.**	**1. 91% 2. 8.3 3. 4.**	**13**	**Yes**	**No**	**Yes 100%**
708.1a	Demonstrate understanding and application of writing process: Brainstorm; Draft; Revise; Edit; Publish	4	21,22,24,25, 26,28	6	1. 6 2. 0 3. 0 4. 0	1. 100% 2. 3. 4.	5		No	
708.1b	Write in a variety of formats to record, generate, and reflect upon ideas.	3	3,19,40	3	1. 3 2. 0 3. 0 4. 0	1. 100% 2. 3. 4.	4		No	
708.1c	Identify and use appropriate style and vocabulary for audience and purpose.	4	3,6,19	3	1. 2 2. 1 3. 4.	1. 67% 2. 33 3. 4.	4		No	
708.2	**Write and edit for correctness and clarity**	**2**		**30**	**1. 27 2. 3 3. 4.**	**1. 90% 2. 10 3. 4.**	**29**	**Yes**	**No**	**Yes 50%**
708.2a	Apply rules and conventions of the following: - Grammar; Punctuation; Capitalization; Spelling; Legibility	2	1,2,4,5,7,8,9,10, 11,12,13,14,15, 16,17,18,,29,31, 32,33,34,35,37,38, 39,41,42	28	1. 27 2. 1 3. 4.	1. 96.4% 2. 5.6 3. 4.	29		No	
708.2b	Develop a paragraph that incorporates a clear and focused main idea and is	3	30,36	2	1. 2. 2	1. 2. 100%	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	supported by details and examples that are appropriate to topic, audience, and purpose. - Incorporate topic sentences, appropriate word choices and sentence structure, transitions, paragraphing, indentation, and organization. Write for personal and practical needs; messages, diaries, journals, thank-you notes, friendly letters, and step-by-step directions.				3. 4.	3. 4.				
708.3	**Write a narrative essay which aligns with the fourth-grade Direct Writing Assessment**	**3**		**1**	**1. 1** **2.** **3.** **4.**	**1. 100%** **2.** **3.** **4.**	**0**	**No**	**No**	**Yes** **67%**
708.3a	Create a multiple-paragraph narrative composition that provides an introductory paragraph and establishes and supports a central idea. Include supporting paragraphs with thoughtful transitions, simple facts, details, and explanation. Conclude with a paragraph that summarizes key points. Properly indent.	3	20	1	1. 1 2. 3. 4.	1. 100% 2. 3. 4.	0		No	
708.3b	Write and publish original creative words that incorporate figurative and descriptive language.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	

Table 4.2
Grade 8 – Language Arts/ Writing Spring 2003
Alignment Table

744 Writing

Rationale: Students write to demonstrate skill and conventions according to purpose and audience

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
744.1	**Understand and use the writing process**	**4**		**8**	**1. 7 2. 1 3. 4.**	**1. 87.5% 2. 12.5% 3. 4.**	**14**	**Yes**	**No**	**Yes 100%**
744.1a	Understand and use steps of the writing process-Brainstorm; Draft; Revise; Edit; Publish	4	2,3,17,21,25	5	1. 5 2. 3. 4.	1.100% 2. 3. 4.	**7**		No	
744.1b	Write in a variety of formats to specifically record, generate, and reflect upon ideas.	3	12	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	**2**		No	
744.1c	Identify and use appropriate style and vocabulary for a particular audience, voice, and purpose.	3	8,14	2	1. 1 2. 1 3. 4.	1.50% 2.50% 3. 4.	**5**		No	
744.2	**Write and edit for correctness and clarity**	**3**		**31**	**1. 30 2. 1 3. 4.**	**1.96.8% 2.3.2% 3. 4.**	**28**	**Yes**	**No**	**Yes 67%**
744.2a	Determine and apply rules and conventions for the following-Eight parts of speech, dependent and independent clauses , and common phrases to include prepositional participle, infinitives, gerunds, and appositives	2	1,4,5,6,7,9,10, 13,15,18,19,20, 22,23,24,26,27, 28,29,30,31, 32,35,36,37, 39,40,	27	1. 27 2. 3. 4.	1.100% 2. 3. 4.	**28**		No	
744.2b	Incorporate a variety of elements of writing-Alliteration; Figurative language; Hyperbole; Metaphor;	4		0	1. 2. 3.	1. 2. 3.	**0**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	Personification; Vocabulary; Idiom				4.	4.				
744.2c	Convey clear and focused main ideas, supported by details and examples that are appropriate to topic, audience, and purpose-Use topic sentences, appropriate word choice, a variety of sentence structures, parallelisms, transitions, paragraphing, indentation, organization, and documentation of sources; -Choose tone, voice, style, mood, and persona appropriate for various purposes, disciplines, and audiences.	3	8,11,12,34	4	1. 3 2. 1 3. 4.	1.75% 2.25% 3. 4.	**0**		No	
744.3	**Write a narrative essay which aligns with the fourth-grade Direct Writing Assessment**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
744.3a	Use facts, data, and processes from technical and non-technical materials to inform through writing.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.3b	Produce documents in appropriate format to inform and explain.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.4	**Write for literary response and expression.**	**4**		**1**	**1. 2.1 3. 4.**	**1. 2.100% 3. 4.**	**0**	**No**	**No**	**No 33%**
744.4a	Compose a response using ideas and techniques from a variety of literature and fine arts that represent many cultures and perspectives.	4		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.4b	Appropriately use a thesis and supporting	3	4	1	1.	1.	**0**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	evidence.				2. 1 3. 4.	2.100% 3. 4.				
744.4c	Write and publish original creative works that include figurative and descriptive language.	4		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.5	**Write to critically analyze and evaluate within the confines of eighth-grade science and social studies curriculum.**	**3**		**1**	**1. 1 2. 3. 4.**	**1.100% 2. 3. 4.**	**0**	**No**	**No**	**No 33%**
744.5a	Analyze for the following: -Purpose; Ideas; Style; Structure; Effectiveness	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.5b	Use thesis and appropriate supporting evidence to persuade or inform a specific audience.	3	16	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.	**0**		No	
744.5c	Use writing to persuade.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.6	**Write to gather, synthesize, and communicate research findings.**	**3**		**2**	**1. 2 2. 3. 4.**	**1. 100% 2. 3. 4.**	**0**	**No**	**No**	**Yes 50%**
744.6a	With teacher support, incorporate a variety of informational and technological resources to perform the following: -Avoid plagiarism through proper use of paraphrasing, quoting, and citing; -When selecting source materials, consider motives credibility, and perspective of	3	21,41	2	1. 2 2. 3. 4.	1.100% 2. 3. 4.	**0**		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	authors; -Formulate thesis or focus and provide relevant support.									
744.6b	Present research findings.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.7	**Write technical information.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
744.7a	Locate sources	2		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	
744.7b	Produce technical documents.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	**0**		No	

753 Writing

Table 4.3
Grade 10 Language Arts / Writing Spring 2002
Alignment Table

Rationale: Students write to demonstrate skill and conventions according to purpose and audience

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
753.1	**Understand and use the writing process**	**3**		**7**	**1. 2 2. 5 3. 4.**	**1. 28.6% 2. 71.4% 3. 4.**		**Yes**	**No**	**Yes 67%**
753.1a	Understand and use steps of the writing process-Brainstorm; Draft; Revise; Edit; Publish	3	2,4,14,15,18	5	1. 2 2. 3 3. 4.	1. 40% 2.60% 3. 4.			No	
753.1b	Write in order to generate, record, and reflect upon ideas.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.1c	Evaluate and choose appropriate style and vocabulary for particular audience.	3	22,23	2	1. 2. 2 3. 4.	1. 2100% 3. 4.			No	
753.2	**Write and edit for correctness and clarity**	**3**		**51**	**1. 38 2. 13 3. 4.**	**1. 74.5% 2.25.5% 3. 4.**		**Yes**	**No**	**Yes 100%**
753.2a	Apply rules and conventions for the following: -Grammar; Punctuation; Capitalization; Spelling.	2	1,3,5,7,9,10,11,12,13,16, 17,19,20,21,24,25,26,28, 29,30,33,35,37,39,41,42, 43,44,45,46,47,48/,50,51,52,53, 54,55,23,40,56	41	1. 38 2. 3 3. 4.	1. 92.7% 2. 7.3% 3. 4.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
753.2b	Formulate purpose, thesis, relevant support, and focused paragraphs: -Use topic sentences, appropriate word choices and sentence structure, Parallelism, transitions, paragraphing, indentation, organization, and documentation of sources; -Choose tone, voice, style, mood, and persona appropriate for different purposes, disciplines, and audiences.	3	6,8,14,18,22,31,32,34,36,38	10	1. 2. 10 3. 4.	1. 2.100% 3. 4.			No	
753.3	**Write to inform and explain**	**3**		**2**	**1. 2. 2 3. 4.**	**1. 2.100% 3. 4.**		**No**	**No**	**Yes 50%**
753.3a	Incorporate facts, data, and processes from technical and non-technical materials into writing.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.3b	Choose appropriate format to inform and explain.	3	4,23	2	1. 2. 2 3. 4.	1. 2.100% 3. 4.			No	
753.4	**Write for literary response and expression.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
753.4a	Compare, contrast and synthesize ideas and techniques	3		0	1. 2.	1. 2.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's item s	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	from a variety of literatures and Fine Arts that represent many cultures and perspectives.				3. 4.	3. 4.				
753.4b	Formulate a thesis and supporting evidence as appropriate.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.4c	Write and publish original creative works using figurative and descriptive language.	4		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.5	**Write to critically analyze and evaluate.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
753.5a	Analyze and evaluate for the following: -Purpose; Idea; Style; Structure; Effectiveness	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.5b	Formulate thesis and select appropriate supporting evidence to persuade or inform a specific audience.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.5c	Present an effective argument using the principles of persuasion (appeals to authority, logic, or emotion).	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.6	**Write to gather, synthesize, and communicate research findings.**	**3**		**2**	**1. 2 2. 3. 4.**	**1. 100% 2. 3. 4.**		**No**	**No**	**Yes 67%**
753.6a	Use and document a variety of technological and informational	3	49	1	1. 1 2.	1.100% 2.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	resources: -Avoid plagiarism through proper paraphrasing, quoting, and citation; Consider motives, credibility, and perspectives of authors when selecting source materials; -Formulate thesis or focus and relevant support.				3. 4.	3. 4.				
75.3.6b	Present research findings.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.6c	Generate clear, concise, and informative technical documents.	3	27	1	1. 1 2. 3. 4.	1.100% 2. 3. 4.			No	

753 Writing

Table 4.4
Grade 10 Language Arts / Writing Fall 2002
Alignment Table

Rationale: Students write to demonstrate skill and conventions according to purpose and audience

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
753.1	**Understand and use the writing process**	**3**		**2**	**1. 1 2. 1 3. 4.**	**1. 50% 2. 50% 3. 4.**		**No**	**No**	**Yes 67%**
753.1a	Understand and use steps of the writing process-Brainstorm; Draft; Revise; Edit; Publish	3	44	1	1. 1 2. 3. 4.	1. 100% 2. 3. 4.			No	
753.1b	Write in order to generate, record, and reflect upon ideas.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.1c	Evaluate and choose appropriate style and vocabulary for particular audience.	3	1	1	1. 2. 1 3. 4.	1. 2100% 3. 4.			No	
753.2	**Write and edit for correctness and clarity**	**3**		**54**	**1. 46 2. 8 3. 4.**	**1. 85.2% 2. 14.8% 3. 4.**		**Yes**	**No**	**Yes 100%**
753.2a	Apply rules and conventions for the following: -Grammar; Punctuation; Capitalization; Spelling.	2	1,2,3,8,9,10,12,13,14,15,16,17, 18,19,20,22,23,24,25,26, 28,29,30,32,33,34,35,36,37,39, 41,42,43,46,47,48,49,50,51,53, 54,55,56,57,58,59,60	47	1. 44 2. 3 3. 4.	1. 93.6% 2. 6.4% 3. 4.			No	
753.2b	Formulate purpose, thesis, relevant support, and focused paragraphs:	3	4,5,6,7,21,27,31	7	1. 2 2. 5 3.	1.28.6% 2. 71.4% 3.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	-Use topic sentences, appropriate word choices and sentence structure, Parallelism, transitions, paragraphing, indentation, organization, and documentation of sources; -Choose tone, voice, style, mood, and persona appropriate for different purposes, disciplines, and audiences.				4.	4.				
753.3	**Write to inform and explain**	**3**		**7**	**1. 4 2. 3 3. 4.**	**1.57.1% 2.42.9% 3. 4.**		**Yes**	**No**	**Yes 50%**
753.3a	Incorporate facts, data, and processes from technical and non-technical materials into writing.	2		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.3b	Choose appropriate format to inform and explain.	3	7,11,21,37,40,45,52	7	1. 4 2. 3 3. 4.	1. 57.1% 2. 42.9% 3. 4.			No	
753.4	**Write for literary response and expression.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
753.4a	Compare, contrast and synthesize ideas and techniques from a variety of literatures and Fine Arts that represent many cultures and perspectives.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
753.4b	Formulate a thesis and supporting evidence as appropriate.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.4c	Write and publish original creative works using figurative and descriptive language.	4		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.5	**Write to critically analyze and evaluate.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
753.5a	Analyze and evaluate for the following: -Purpose; Idea; Style; Structure; Effectiveness	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.5b	Formulate thesis and select appropriate supporting evidence to persuade or inform a specific audience.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.5c	Present an effective argument using the principles of persuasion (appeals to authority, logic, or emotion).	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.6	**Write to gather, synthesize, and communicate research findings.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**		**No**	**No**	**No 0%**
753.6a	Use and document a variety of technological and informational resources: -Avoid plagiarism through proper paraphrasing, quoting, and	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	citation; Consider motives, credibility, and perspectives of authors when selecting source materials; -Formulate thesis or focus and relevant support.									
75.3.6b	Present research findings.	3		0	1. 2. 3. 4.	1. 2. 3. 4.			No	
753.6c	Generate clear, concise, and informative technical documents.	3			1. 2. 3. 4.	1. 2. 3. 4			No	

753 Writing

Table 4.5
Grade 10 Language Arts / Writing Spring 2003
Alignment Table

Rationale: Students write to demonstrate skill and conventions according to purpose and audience

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NWEA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
753.1	**Understand and use the writing process**	**3**		**5**	**1. 3 2. 2 3. 4.**	**1. 60% 2. 40% 3. 4.**	**13**	**No**	**No**	**Yes 67%**
753.1a	Understand and use steps of the writing process-Brainstorm; Draft; Revise; Edit; Publish	3	1,21	2	1. 2 2. 3. 4.	1. 100% 2. 3. 4.	9		No	
753.1b	Write in order to generate, record, and reflect upon ideas.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
753.1c	Evaluate and choose appropriate style and vocabulary for particular audience.	3	10,15,53	3	1. 1 2. 2 3. 4.	1. 33% 2.67% 3. 4.	4		No	
753.2	**Write and edit for correctness and clarity**	**3**		**47**	**1. 39 2. 8 3. 4.**	**1. 83% 2.17% 3. 4.**	**41**	**Yes**	**No**	**Yes 100%**
753.2a	Apply rules and conventions for the following: -Grammar; Punctuation; Capitalization; Spelling.	2	2,3,4,5,6,7,11,12,13,14, 16,18,19,20,22,23,25,27 28,31,32,33,34,35,36 37,38,39,40,41,42,44 45,46,47,48,49,50,51	43	1. 39 2. 4 3. 4.	1. 90.7% 2. 9.30% 3. 4.	38		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
			52,53,55,							
753.2b	Formulate purpose, thesis, relevant support, and focused paragraphs: -Use topic sentences, appropriate word choices and sentence structure, Parallelism, transitions, paragraphing, indentation, organization, and documentation of sources; -Choose tone, voice, style, mood, and persona appropriate for different purposes, disciplines, and audiences.	3	15,24,26,29	4	1. 2. 4 3. 4.	1. 2.100% 3. 4.	3		No	
753.3	**Write to inform and explain**	**3**		**5**	**1. 5 2. 3. 4.**	**1.100% 2. 3. 4.**	**1**	**No**	**No**	**Yes 100%**
753.3a	Incorporate facts, data, and processes from technical and non-technical materials into writing.	2	9	1	1. 1 2. 3. 4.	1.100 % 2. 3. 4.	0		No	
753.3b	Choose appropriate format to inform and explain.	3	30,43,54,56	4	1. 4 2. 3. 4.	1.100% 2. 3. 4.	1		No	
753.4	**Write for literary response and expression .**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
753.4a	Compare, contrast and synthesize ideas and techniques from a variety of literatures and Fine Arts that represent	3		0	1. 2. 3.	1. 2. 3.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	many cultures and perspectives.				4.	4.				
753.4b	Formulate a thesis and supporting evidence as appropriate.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
753.4c	Write and publish original creative works using figurative and descriptive language.	4		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
753.5	**Write to critically analyze and evaluate.**	**3**		**0**	**1. 2. 3. 4.**	**1. 2. 3. 4.**	**0**	**No**	**No**	**No 0%**
753.5a	Analyze and evaluate for the following: -Purpose; Idea; Style; Structure; Effectiveness	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
753.5b	Formulate thesis and select appropriate supporting evidence to persuade or inform a specific audience.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
753.5c	Present an effective argument using the principles of persuasion (appeals to authority, logic, or emotion).	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
753.6	**Write to gather, synthesize, and communicate research findings.**	**3**		**1**	**1. 2. 1 3. 4.**	**1. 2. 100% 3. 4.**	**1**	**No**	**No**	**No 33%**
753.6a	Use and document a variety of technological and informational resources: -Avoid plagiarism through proper	3	17	1	1. 2. 1 3. 4.	1. 2.100 % 3. 4.	0		No	

Item #	Standard /statement	Cognitive Level	Item #'s	Total # of items	# items per cog. Level	Percent items per cog level	NW EA # 's items	Acceptable Categorical Concurrence	Acceptable Depth of Knowledge	Acceptable Range of Knowledge
	paraphrasing, quoting, and citation; Consider motives, credibility, and perspectives of authors when selecting source materials; -Formulate thesis or focus and relevant support.									
75.3.6b	Present research findings.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	0		No	
753.6c	Generate clear, concise, and informative technical documents.	3		0	1. 2. 3. 4.	1. 2. 3. 4.	1		No	

Appendices

Appendix A:

Depth of Knowledge Levels

General Descriptions

Level 1: Recall

Recall of fact, information, definition, term, or procedure.
Key words may include: identify, recall, recognize, use and measure. Verbs such as describe and explain could be classified at different levels depending on what is to be described and explained.

Level 2: Skill/Concept

Use of information, conceptual knowledge, procedures, two or more steps, etc. Requires students to make decisions on how to proceed. Key words may include: classify, organize, estimate, make observations, collect and display data and compare data. Implies more than one step.

Level 3: Strategic Thinking

Requires reasoning, developing a plan or sequence of steps; has some complexity; more than one possible answer; generally takes less than 10 minutes to do. In most cases asking a student to explain their thinking is a Level 3. May include citing evidence, drawing conclusions from observations, and developing a logical argument and using concepts to solve a problem.

Level 4: Extended Thinking

Requires an investigation; time to think and process multiple conditions of the problem or task; and more than 10 minutes to do non-routine manipulations. Cognitive demands are high and the work complex. May include designing and conducting experiments, making connections between a finding and related concepts, combining and synthesizing ideas into new concepts or critiquing experimental designs.

Reading Depth of Knowledge Descriptions

Reading Level 1

Level 1 requires students to receive or recite facts or to use simple skills or abilities. Oral reading that does not include analysis of the text as well as basic comprehension of a text is included. Items require only a shallow understanding of text presented and often consist of verbatim recall from text, or simple understanding of a single work or phrase. Some examples that represent, but to not constitute all of, Level 1 performance are:

- Support ideas by reference to details in the text.
- Use a dictionary to find the meaning of words.
- Identify figurative language in a reading passage.

Reading Level 2

Level 2 includes the engagement of some mental processing beyond recalling or reproducing a response; it requires both comprehension and subsequent processing of text or portions of text. Inter-sentence analysis of inference is required. Some important concepts are covered but not in a complex way. Standards and items at this level may include words such as summarize, interpret, infer, classify, organize, collect, display, compare, and determine whether fact or opinion. Literal main ideas are stressed. A Level 2 assessment item may require students to apply skills and concepts that are covered in Level 1. Some examples that represent, but do not constitute all of, Level 2 performance are:

- Use context cues to identify the meaning of unfamiliar words.
- Predict a logical outcome based on information in a reading selection.
- Identify and summarize the major events in a narrative.

Reading Level 3

Deep knowledge becomes a greater focus at Level 3. Students are encouraged to go beyond the text; however, they are still required to show understanding of the ideas in the text. Students may be encouraged to explain, generalize, or connect ideas. Standards and items at Level 3 involve reasoning and planning. Students must be able to support their thinking. Items may involve abstract theme identification, inference

across an entire passage, or students' application of prior knowledge. Items may also involve more superficial connections between texts. Some examples that represent, but do not constitute all of, Level 3 performance are:

- Determine the author's purpose and describe how it affects the interpretation of a reading selection.
- Summarize information from multiple sources to address a specific topic.
- Analyze and describe the characteristics of various types of literature.

Reading Level 4

Higher-order thinking is central and knowledge is deep at Level 4. The standard or assessment item at this level will probably be an extended activity, with extended time provided for completing it. The extended time period is not a distinguishing factor if the required work is only repetitive and does not require the application of significant conceptual understanding and higher-order thinking. Students take information from at least one passage of a text and are asked to apply this information to a new task. They may also be asked to develop hypotheses and perform complex analyses of the connections among texts. Some examples that represent, but do not constitute all of, Level 4 performance are:

- Analyze and synthesize information from multiple sources.
- Examine and explain alternative perspectives across a variety of sources.
- Describe and illustrate how common themes are found across texts from different cultures.

Appendix B:

Explanation of Columnar Data in Figures 2.1 through 4.5.

Column #	Label	Explanation
1	Item #	Idaho Standard or Content Knowledge and Skills numerical designation.
2	Standard/statement	Narrative statement of Idaho Standard or Content Knowledge and Skills
3	Depth of Knowledge	Depth of Knowledge level assigned to individual Idaho Standards and Content Knowledge and Skills statements
4	Items #'s	Item/task numbers from assessment instrument aligned with the individual Idaho Content Knowledge and Skills statements/objectives. All of the individual item numbers listed for each objective also assess their superior standard.
5	Total # of items	Number of items aligned with individual Idaho Standard or Content Knowledge and Skills statements
6	# items per cognitive level	Number of items at each Cognitive Level for individual Idaho Standards or Content Knowledge and Skills statements.
7	% items per cognitive level	Percent of items at each Cognitive Level for individual Idaho Standards or Content Knowledge and Skills statements.
8	NWEA #s items	Number of items aligned to individual Idaho Standards or Content Knowledge or Skills statement – as assigned by NWEA. Available for only Spring 2003 assessment instruments.
9	Acceptable Categorical Concurrence	Yes or no, did this assessment instrument meet the criteria for Categorical Concurrence? To meet the criteria, there must be a minimum of 6 assessment items/tasks for an individual standard.
10	Acceptable Depth of Knowledge	Yes, no or weak, did this assessment instrument meet the criteria for Depth of Knowledge? To meet the criteria, at least 50% of the items addressing the Standard or Content Knowledge and Skills, must be "at or above the Depth of Knowledge level" of the standard or objective. If 40% to 50% of the items are "at or above" the Depth of Knowledge level of the

		standard or objective, it is said to have “weakly” met the criteria.
11	Acceptable Range of Knowledge	Yes or no. Is there at least one assessment item/task aligned to at least 50% of the objectives (Content Knowledge and Skills) for the Standard? The percent indicates the percent of total objectives that have at least one item/task aligned to them.

Appendix C:
Resumes of Alignment Staff at NWREL

DR. JAMES C. LEFFLER

Primary Areas of Expertise

Student Classroom Assessment
Program Evaluation
Large Scale Assessment and State Standards
Curriculum, Assessment and Standards Alignment
Literacy and Literacy Assessment
Performance Assessment
Assessment Literacy
Project Design
Teacher Preparation
Action Research

Education and Professional Credentials

1990 EdD Educational Leadership – Administration, Portland State University, Portland, OR

1974 MEd Curriculum Development Eastern Washington University, Cheney, WA

1971 BAEd Major: Psych Human Development Eastern Washington University, Cheney, WA

Washington State Pre-school through Grade 12 Continuing Teaching Certification

Washington State Pre-school through Grade 12 Principal's Certification

Employment

Present Unit Directorr – OERI Task 1 Northwest Regional Educational Laboratory Portland, OR

1981-2001	Evergreen School District Vancouver, WA Jr. High English, Elementary Reading Specialist, Grants Manager, Curriculum Coordinator, Elementary Principal, Fiscal Research, Manager of Assessment.
1993 – Present	City University Bellevue, WA Adjunct Faculty MEd Program, Adjunct Faculty MiT Program Taught: History of Education, Philosophy of Education, Research, Action Research, Curriculum, Accessing Information. Developed syllabus for M.Ed. Emphasis in Reading
1998-2001	Educational Service District #112 Vancouver, WA Instructor – Assessment Training Cadre
1991-1992	Sierra University California On-site mentor and instructor for Ph.D. distance learning Student
1987-1990	Portland State University Portland, OR Supervisor of Student Teachers for PSU, U of Portland, Lewis and Clark College, Concordia College
1978-1981	Educational Service District #112 Vancouver, WA Grants Manager and Curriculum Generalist
1977-1978	Educational Service District #121 Seattle, WA Author and Teacher trainer for federal Career Education grant
1975-1977	Camas School District, Camas, WA Project Director and Teacher Trainer with Title III Career Education Grant
1974-1975	Clarkston School District Clarkston, WA Teacher Trainer with Title III Career Education Grant
1971-1974	Royal School District Royal City, WA Classroom teacher – First Grade and Second Grade

DR. MEGH THAPA

Primary Areas of Expertise

Program/Project Evaluation
Program Planning
Educational/Social/Behavioral Research

Education

Ph.D., Stanford University -- policy analysis & administration, comparative education, theories and methods of qualitative, quantitative and comparative research, 1989
M.P.H., University of California at Berkeley, School of Public Health -- behavioral science, health services research and evaluation, 1990
M.A., Tribhuvan University, political science, 1976
B.A., Tribhuvan University, economics & political science, 1969

Employment

2001-present	Northwest Regional Educational Laboratory (NWREL) Senior Associate, Evaluation Program
1993-2000	Dallas Independent School District, Texas Evaluation Specialist, Accountability & Information Systems Division
1992-93	KAI Science & Technology, Inc., California Senior Consultant, Research and Development

Professional Activities

American Educational Research Association (AERA) -- Reviewer of submissions for annual meetings for Divisions and special interest groups (SIGs); session chair/discussant at annual meetings; Secretary-treasurer and Awards Committee co-chair/member of the International Studies SIG; Secretary-Treasurer of the Research on Evaluation SIG

Dallas Children’s Advocacy Center (DCAC), Dallas, Texas -- Evaluator (volunteer) of the Center's annual Crimes Against Children Conferences and professional development workshops and courses offered at the conferences (1996-99)

Selected Reports/Papers

Final evaluation report of the parent involvement in the 1998-99 Title I schools (Report No. REIS99-314-3). Dallas, Texas: Dallas Public Schools Division of Evaluation, Accountability and Information Systems (1999).
Title I evaluation design, 1999-2000. Dallas, Texas: Dallas Public Schools Division of Evaluation, Accountability and Information Systems (1999).

Evaluation report of the 1998-99 Title I programs in private schools and institutions for neglected or delinquent children and youth (Report No. REIS99-316-3). Dallas, Texas: Dallas Public Schools Division of Evaluation, Accountability and Information Systems (1999).

Challenges to the evaluation of an evolving, innovative educational program (co-author). Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL (1997).

Final report of the observation of the 1996-97 Title I instructional interventions (Report No. REIS97-277-3). Dallas, Texas: Dallas Public Schools Division of Research, Evaluation and Information Systems (1997).

Final evaluation report of the 1996-97 Title I instructional program (Report No.REIS97-270-3) (co-author). Dallas, Texas: Dallas Public Schools Division of Research, Evaluation and Information Systems (1997).

Final report of the Year-round Education Program evaluation (Report No. REIS96-605-3). Dallas, Texas: Dallas Public Schools Division of Research, Planning and Evaluation (1996).

Title I instructional decision-making guide (co-author). Dallas, Texas: Dallas Public Schools Division of Research, Planning and Evaluation (1995).

Final evaluation of the 1994-95 Chapter I instructional program (Report No. REIS95-270-2) (co-author). Dallas, Texas: Dallas Public Schools Division of Research, Planning and Evaluation (1995).

Ethnic and gender inequality in Alaska: Changes in educational and occupational attainment. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA (1994).

Final evaluation report of the 1993-94 Chapter I program in private, nonpublic schools and institutions for neglected or delinquent children (Report No. REIS94-271-2). Dallas, Texas: Dallas Public Schools Division of Research, Planning and Evaluation (1994).

Anticipatory anthropology and the tele-microelectronic revolution: A preliminary report from Silicon Valley (co-author). *Anthropology & Education Quarterly 16*(1): 3-30.

Professional Organizations

American Educational Research Association (AERA)
American Evaluation Association (AEA)

DR. JANA POTTER

Primary Areas Of Expertise

project design and management
nonformal and adult education
community development
refugee resettlement
teacher and trainer training
participatory methodologies
cross-cultural education
organizational development
event planning

Education

M.S.	Educational Policy and Foundations (International Intercultural Development Education), Florida State University, 1992
Certification	Teaching English as a Foreign Language, Hastings, England, 1987
Certification	Special Education, Sam Houston State University, 1981
B.S.	Early Childhood Education and Elementary Education, University of West Florida, 1979

PROFESSIONAL EXPERIENCE

1998 - present	Associate, Northwest Regional Educational Laboratory, Portland, Oregon
1995 - 1997	Associate Peace Corps Director, U.S. Peace Corps, Ghana, West Africa
1993 - 1995	Associate Peace Corps Director, U.S. Peace Corps, Uganda, East Africa
1988 - 1991	Teacher Supervisor World Learning, Phanat Nikhom Refugee Processing Center, Thailand
1984 - 1987	Peace Corps Volunteer, Teacher Supervisor Curriculum Developer, Ministry of Education of Sierra Leone, United Nations Development Program, Makeni Teachers College, Sierra Leone, West Africa
1980 - 1984	Teacher/ Counselor, Hope Center for Youth Girls Wilderness Camp, Groveton, Texas

1978 - 1980 Teacher, Project Head Start, Pensacola, Florida

Selected Publications

Potter, J. (1987) *Teaching in the Whole Garden* (Information Collection Exchange R0085). Washington, D.C. United States Peace Corps.

Potter, J., Blankenship, J. and Carlsmith, L. (1999) *So That Every Child Can Read.* Portland, OR, Northwest Regional Educational Laboratory.

MELINDA LEONG

Primary Areas of Expertise

Elementary and Middle School Education
Professional Development

Education

Teachers College, Columbia University, Candidate for Ed.D. Curriculum and Teaching, 1998-2001
M.S., The City University of New York at City College, Administration and Supervision, 1997
M.S., The City University of New York at Hunter College, Elementary Education: Concentration in Science Education, 1994
B.A., Tufts University, American Studies and Education, 1990

Employment

Northwest Regional Educational Laboratory, Portland, OR
Mathematics and Science Senior Associate
November 2001 – Present

- Provide leadership in designing effective technical assistance and training on mathematics and science curriculum, instruction and assessment.
- Provide on-site technical assistance and training services to regional and national clients in mathematics and science.
- Lead development and dissemination activities to expand and enhance the NWREL Mathematics Problem Solving™ and the NWREL Science Inquiry™ Models.
- Develop new services and projects to expand the capability and expertise of NWREL.
- Identify and lead proposal development efforts.
- Montana Liaison for the Mathematics and Science Education Center.

Manhattan Academy of Technology, New York City Board of Education, New York, NY
Director and Founder
January 1997 – June 2001

- Leader and founder of middle school with a focus on integrating technology into a three-year comprehensive and rigorous academic program.
- Successfully wrote, submitted and received over $200,000 in grants to enhance educational programs.
- Researched, analyzed, and adapted effective instructional methodologies, materials, and organizational models.
- Created and conducted professional development opportunities for teachers.
- Analyzed needs of students most at risk and provided prevention services to improve performance.
- Pursued collaborations with community based organizations to provide students with additional arts and social programs.

- Created and implemented programs for parents on improving student academic and social development by fostering an exchange between the school and home.
- Organized volunteer programs that empowered students to make positive contributions to their community.

P.S. 124, New York City Board of Education, New York, NY
Teacher
September 1992 – June 1997

- Experience developing curriculum for and teaching grades kindergarten through six in mathematics, English language arts, social studies, science, art, computer technology, and physical education adhering to local and state standards.
- Experience working with students of varying achievement levels, learning styles, and special educational needs in challenging, urban, multi-cultural settings of differing socio-economic backgrounds.
- Incorporated a variety of instructional methodologies: inquiry-based learning, problem solving, interactive experiences, team teaching, thematic units, balanced and literature-based approaches, writing process, integration of higher level thinking skills, cooperative learning, and portfolio assessment.
- Created a science website, a non-fiction resource center, and organized the science fair for two years.
- Developed and led after-school activities for students to enhance their educational programs.
- Active member of various school decision-making, curriculum, and professional development committees.
- Conducted workshops to inform parents on curriculum to foster an exchange of ideas.
- Created and conducted weekly and monthly professional development activities for teachers to examine standards for reading, writing, and science; learn balanced literacy teaching strategies; and study instructional methods that promoted an inquiry-based approach to teaching and learning science and mathematics.

The Florentine School, Private Learning Center, New York, NY
Teacher
January 1994 – June 1995

- Tutored students in English language acquisition: reading, writing, listening and speaking in grades one through eight.

P.S. 329, District 21, New York City Board of Education, Brooklyn, NY
Teacher
September 1990 – June 1992

- Taught and developed curriculum in math, science, language arts, social studies, art, and physical education at fifth grade level.

Projects/Activities/Honors

Magnet Grant Recipient, 2000-2001
New Visions Chase Learning Grant Recipient, 1999-2001
Council for Basic Education Independent Study Fellowship Recipient, Summer 1996
Board of Education of the City of New York Assistant Principal Internship Program, 1995 – 1997

NYNEX/National Geographic Award, Fall 1995
UFT Technology Grant Recipient, Spring 1995
Project Energizing Teachers Fellow, Spring and Summer 1995
SESP Mini-Grant Recipient, Fall 1994
SESP Leadership Project, Spring 1993
Kappa Delta Pi, 1994 and 1997

Claire Gates

Primary Areas of Expertise

Standards-based teaching in mathematics education
Professional development
Talented and Gifted

Education

Master of Arts, Mathematics, Sam Houston State University
Bachelor of Arts, Mathematics, University of North Texas

Employment

2002-present	Associate, Mathematics and Science Education Center Northwest Regional Educational Laboratory
2001 Jan-Oct	Regional Education Services Manager, Carnegie Learning, Inc.
1993-2001	High School mathematics teacher, Denton, Texas
1979-1992	Junior High School mathematics teacher, Denton, Texas
1971	Mathematics teacher, San Antonio Community College, San Antonio, Texas

Projects/Activities

Presented workshops at regional and national conference on "Ensuring Success for All Students in Secondary Mathematics"

Member of the Ryan High School campus leadership team. Trained in site-based management techniques. Created survey, compiled statistics and made report for campus needs assessment. Experienced in creating a campus action plan.

Served as Ryan High School liaison with University of North Texas Professional Development School. Participated in designing and implementing a new model for teacher education.

1996 recipient of Keep Texas Beautiful Leadership Award.

1990 GTE Gift Fellow.

Participated in a two-year National Science Foundation program for teachers of math and science.

Presented workshops on integrating science and mathematics in the classroom current mathematical needs for U.S. high schools.

Developed and supervised a school recycling plan—reducing waste and saving the school money.

Sponsored state award-winning Ecology Club

Taught in a university summer program for gifted/talented minority students

Professional Organizations

National Council of Teachers of Mathematics

KAREN DRAPER

Primary Areas of Expertise

Curriculum design
Professional development
Middle school education
Elementary school math education

Education

Master of Arts, Administration and Curriculum Design, Gonzaga University, 1993
Bachelor of Education, Physical Education and Science, Queen's University, 1976
Bachelor of Arts, Bachelor of Physical Education, Psychology and Physical Education, McMaster University, 1975

Employment

2002 - present	Associate, Mathematics and Science Education Center Northwest Regional Educational Laboratory, Portland, OR
1999 - 2002	Manager, Student Services and Professional Placement Manager, Computational Finance Program Oregon Health & Science University, Portland, OR
1996 - 1999	Manager, Human Resources Park Place Wood Products, Oregon City, OR
1990 - 1995	Math Coordinator, Teacher – David Thompson Junior High Calgary Board of Education, Calgary, AB
1989 - 1994	Principal, Summer School – Elementary and Junior High Calgary Board of Education, Calgary, AB
1979 - 1990	Math Coordinator, Teacher – Elboya Elementary and Junior High Calgary Board of Education, Calgary, AB
1977 - 1978	Teacher – South Carleton Senior High Carleton Board of Education, Ottawa, ON

Projects/Activities

Calgary Board of Education Leadership program – Cognitive Coaching, From Competence to Excellence, Leadership Challenge, Enhancing Leadership Skills, The Role of the School-Based Leader, Accountability: A Habit of Heart and Mind, Leadership and Accountability for Students with Exceptional Needs, Quality Assurance: School Improvement Plan, Teacher Evaluation, Gender Issues

Workshops and Presentations (selected)

"Cognitive Development of Addition Skills", Morrow County in-service, Boardman, OR
"Effective Math Strategies, Grades 7-12", Montana Title 1 Conference, Great Falls, MT
"Math Improvement Strategies", Montana Title 1 Conference, Great Falls, MT
"Lenses on Learning", Willamette ESD, Salem, OR
"Understanding Alternative Algorithms in Math", Billings School District PD, Billings, MT
"Understanding Alternative Algorithms in Math", Fairbanks Math Team workshop, Fairbanks, AK
"Enrichment Projects for Math Classrooms", Calgary Board of Education Math in-service
"Cooperative Learning in Math Classrooms", MCATA conference, Lethbridge, AB
"Teaching Integers Using Manipulatives", MCATA conference, Edmonton, AB
"Differentiated Enrichment Activities", MCATA conference, Calgary, AB
"Fractions Can be Fun and Games", NCTM conference, Edmonton, AB
"Math in the Library", MCATA conference, Lethbridge, AB

Publications (selected)
"Fraction Games", Delta K
Fibonacci-Palindromic Art", Math Post

Rebecca Novick

Primary Areas of Expertise

Early Childhood Care and Education
Language and Literacy Development
Qualitative Research

Education

Ph.D., University of Oregon, Early Childhood/Special Education, 1994
M.S., University of Oregon, Early Childhood/Special Education, 1990
B.A., University of Oregon, Sociology, 1988
Honors: Phi Beta Kappa, June 1996

Professional Experience

2001-Present	Northwest Regional Educational Laboratory Unit Manager, Child and Family Program
1994-2001	Northwest Regional Educational Laboratory Associate, Child and Family Program
8/94-12/94	Head Start, Eugene, Oregon Classroom Teacher
1990-1994	Building a Strong Environment (BASE), Center on Human Development, University of Oregon Classroom Manager/Qualified Mental Health Provider
1991-1994	Early Intervention Program, University of Oregon Graduate Teaching Fellow, Masters-Level Instructor, Practicum Supervisor
1991-1992	Lane County Health and Human Services, Eugene, Oregon Research Assistant

1967-1969 Head Start, San Francisco, California
Classroom Teacher

Current Projects/Activities

Research, writing, and development of products and training in the areas of early language and literacy, family engagement, and culturally responsive teaching

Selected Publications

Novick, R. (May, 2002). Learning to read the heart: nurturing emotional literacy. *Young Children.*

Novick, R., Fisher, A., and Ko, L. *The Unity Project: Creating a circle of awareness.* Portland, OR: Northwest Regional Educational Laboratory

Novick, R. (1999*).Family involvement and beyond: School-based child and family support programs.* Portland, OR: Northwest Regional Educational Laboratory.

Novick, R. (1999). *Actual schools, possible practices: New directions in professional development*. Portland, OR: Northwest Regional Educational Laboratory.

Novick, R. (1999). Supporting early literacy: Doing things with words in the real world. *Childhood Education*, 76(2), 70-76.

Novick, R. (1998). *Learning to read and write: A place to start.* Portland, OR: Northwest Regional Educational Laboratory.

Novick, R. (1998). The Comfort Corner: Fostering resiliency and emotional intelligence. *Childhood Education*, 74(4), 200-204.

Novick, R. (1997). *Successful early childhood education in an imperfect world: Lessons learned from four Northwest Schools*. Portland, OR: Northwest Regional Educational Laboratory.

Novick, R. (1996). Actual schools, possible practices: New directions in professional development. (1996). *Educational Policy Analysis Archives,* 4 (14).

Novick, R. (1996). *Developmentally appropriate practice and culturally responsive teaching.* (1996). Portland, OR: Northwest Regional Educational Laboratory.

Connard, C., Novick, R., & Nissani, H. *(1996). Working Respectfully with Families: A Practical Guide for Educators and Human Service Workers.* Portland, OR: Northwest Regional Educational Laboratory.

Novick, R. (1993). Activity-Based intervention and Developmentally appropriate practice: Points of convergence. *Topics in Early Childhood Special Education*, 13 (4), 403-417.

Selected Workshops and Presentations

Carr, M., Dauer, S., and Novick, R. (January 25, 2002).Using *Comprehension Strategies To Enhance Reading Proficiency*. Presentation at the Oregon Association for Comprehensive Education, Seaside, OR.

Novick, R., Carr, M., and Potter, J. (October 30, 2001). *Literacy and Action Research.* Presentation at the Education Now and in the Future Conference. Portland, Oregon.

Novick, R., and Potter, J. (June 14-15, 2001). *Literacy and Action Research.* Presentation at the Oregon Association of Small Schools, Monmouth, Oregon.

Novick, R. Meeks, E., Carew, Co. (April 28, 2000). Family Involvement and Beyond: The Polson Partnership Project, Family Resource Coalition, Chicago, Illinois.
McManus, M. & Novick, R. (March, 2000). Family Focus through Community Involvement, American Association of School Administrators, San Francisco, California.
Novick, R. & Pottmeyer, S. (January, 1999). *Parent Involvement, Literacy, and the Paraeducator.* Presentation at the Oregon Association for Comprehensive Education, Seaside, OR.
Novick, R. (December, 1999). *Learning to read and write: a place to start*. Presentation at the Unity for Excellence Conference, Seattle, Washington.
Novick, R. (June, 1999). *Brain Research: Informing Teaching/Learning, Impacting Behavior*. Presentation at the Violence Prevention Summer Institute, Salem, Oregon.
Novick R. (May, 1999). Learning to Read and Write: A Place to Start. Presentation at the Alaska Parents and Teachers Association annual conference. Anchorage, Alaska.
Novick, R. and Pottmeyer, S. B. (April, 1999).*Supporting Early Literacy*. Presentation at the Oregon Association for the Education of Young Children Spring Conference, Albany, Oregon.
Novick, R. (March, 1999). *Reading Research and Effective Practices.* Presentation at the Reading Excellence and Class Size Reduction Technical Assistance and Application Workshop, San Francisco, California.
Novick, R. (February, 1999). *Learning to Read and Write: A Place to Start*. Presentation at the Assuring Competency in Early Reading Conference, Portland, Oregon.
Novick, R. (November, 1998). *Research on Early Brain Development: Implications for Educational Practices in the Early Elementary Years.* Keynote presentation at the Association of Genetic Epistemology, Portland, Oregon.
Novick, R. and Pottmeyer, S.B. (October, 1998). *Learning to Read and Write: A Place to Start*. Presentation at the America Reads Conference, Seattle, Washington.
Meeks, E., and Hogenson, D., Novick, R. (September, 1997). *Development and Implementation of the Polson Partnership Project.* Presentation at the Improving America's Schools Conference, San Diego, CA.
Novick, R., & Sandler-Sigman, R. (December, 1996). *Working Respectfully with Families.* Presentation at the Empowering Families Conference, San Antonio, Texas.

Professional Organizations

Association for Supervision and Curriculum Development
National Association for the Education of Young Children
National Council for Teachers of English

Awards:

National Center on Child Abuse and Neglect doctoral fellowship

Rebecca Novick, Ph.D., is a unit manager and Language and Literacy Team Lead in the Northwest Regional Educational Laboratory's (NWREL) Child and Family Program. As a writer and researcher in the area of early care and education, Novick has authored a number of articles and publications, including a recent NWREL publication entitled, *Many paths to Literacy: Language, Literature, and Learning in the Primary Classroom.* She has conducted workshops and made presentations at state, regional, and national conferences. Prior to coming to NWREL, Novick worked as a classroom teacher in a number of Head Start and early intervention programs, and provided parenting education and support for parents involved with a child protection agency.

MAUREEN SHERRY CARR

PRIMARY AREAS OF EXPERTISE

Curriculum Development and Instruction
Literacy, K- Adult
Professional Development

EDUCATION

Ph. D., Oregon State University, Educational Foundations, 1990
M. Ed., Oregon State University, Reading and Elementary Education, 1984
B. A., University of Rhode Island, History, 1963

EMPLOYMENT

2001-Present	Senior Associate, Child and Family Program Northwest Regional Educational Laboratory
2000 - 2001	Assistant Professor, Teacher Education Division Western Oregon University
1996-2000	Associate-Curriculum and Instruction Northwest Regional Educational Laboratory.
1995-1996	Visiting Assistant Professor, Linfield College
1992-1995	Assistant Professor, Western Oregon University
1991-1992	Instructor-Writing and Learning Center, Oregon State University
1990-1991	Assistant Professor, Oregon State University
1985-1990	Instructor, Oregon State University, 1985-1990
1984-1986	OSU Reading Clinic, Oregon State University
1977-1978	Teacher, Floyd County Public Schools, Floyd, VA

1967-1973 Teacher, Liverpool Central School District, Liverpool, NY

1965-1967 Teacher, Johnston Public Schools, Johnston, RI

1963-1964 Teacher, St. Joseph's Elementary School, Pawtucket, RI

WORKSHOPS AND PRESENTATIONS

"Curriculum Inquiry: Improving Academic Literacy: Learning and Teaching
through Reading and Writing" reading institute for secondary educators. Parkrose High School, Parkrose School District, Portland, OR, August 21-25, 2000. University Credit Offered through Portland State University.

"Curriculum Inquiry Cycle: Stimulating and Supporting Literacy across the Curriculum" workshop for middle school teachers. Hauton B. Lee Middle School, Reynolds School District, Portland, OR, March 15-17, 2000.

"Reading to Learn": Strategies and Assessments", workshop for middle and secondary
content area teachers. Douglas County ESD, Roseburg, OR, February 4, 2000.

"Curriculum Inquiry Cycle: Stimulating and Supporting Literacy" workshop for elementary and
middle school teachers. Siletz Elementary-Middle School, Lincoln County, OR, November 12, 1999 and " Connecting Research and Practice in Reading", January 3, 2000.

"Learning to Read-reading to Learn", workshop for elementary and middle school teachers. North Bend School District, OR, September 24, 1999.

"Supporting Students: Reading to Learning the Content Areas", institute for middle and secondary content area teachers. Douglas County ESD Math and Reading Institute, Umpqua Community College, Roseburg, OR, August 17-18, 1999.

"Curriculum Inquiry Cycle: Making Decisions in Reading and Language Arts" workshop for elementary teachers. Newton USD #373, Newton, KS, January 15, 18, 1999.

"Curriculum Inquiry Cycle: Examining Current Practice in Reading and Language Arts" workshop for elementary teachers. Newton USD #373, Newton, KS, November 25, 1998

"Curriculum Inquiry and Reading Institute for Middle School Teams," institute for Portland Public Schools, Portland, OR, June 29-July 1, 1998.

"Reading Research, Standards and Classroom Practice: Making Connections," workshop for middle and high school teachers. Lebanon Public Schools, OR, October 26, 1998.

"Curriculum Inquiry: Improving Learning and Teaching ," presentation Montana's Partners in Teaching Conference, Billings, MT, October 1-2, 1998.

"Curriculum Inquiry, Reading and Oregon Standards", workshop for elementary teachers. Lebanon Public Schools, OR, September 25, 1998

"Comprehension in the Content Areas", workshop for elementary teachers. Greater Albany Public Schools, February 4, 1993

SELECTED PUBLICATIONS

The Curriculum Inquiry Cycle: Improving Learning and Teaching Second Edition (2000). Portland, OR: Northwest Regional Educational Laboratory.

The Curriculum Inquiry Cycle: Researching Our Classrooms (1999). Portland, OR: Northwest Regional Educational Laboratory (with Jane Braunger).

The Curriculum Inquiry Cycle: Creating Optimal Learning Environments (1998). Portland, OR: Northwest Regional Educational Laboratory (with Jane Braunger).

The Curriculum Inquiry Cycle: Making Decsions (1998). Portland, OR: Northwest Regional Educational Laboratory (with Jane Braunger).

The Curriculum Inquiry Cycle: Examining Current Practice (1998). Portland, OR: Northwest Regional Educational Laboratory (with Jane Braunger).

The Curriculum Inquiry Cycle: Improving Learning and Teaching (1998). Portland, OR: Northwest Regional Educational Laboratory (with Jane Braunger).

A Regional Depiction: Standards-Based Reform in the Northwest (1998). Portland, OR: Northwest Regional Educational Laboratory.

Expanding Conceptions of Giftedness, (1991). **The Bridge**, 3 (2), 3-7,
Portland, OR: Oregon Association for Supervision and Curriculum Development.

PROFESSIONAL ORGANIZATIONS

Association for Supervision and Curriculum Development
International Reading Association
Oregon Reading Association

Appendix D:
Reference List

La Marca, P. M., Redfield, D., Winter, P. C., Bailey, A., & Hansche Despriet, L. (2000). *State Standards and State Assessment Systems: A Guide to Alignment.* Washington DC: Council of Chief State School Officers.

Peer Reviewer Guidance For Evaluating Evidence of Final Assessments Under Title I of the Elementary and Secondary Education Act. (1999). Washington DC, US Department of Education.

Webb, N. L. (1997). Determining alignment of expectations and assessments in mathematics and science education. National Institute for Science Education, Vol. 1, No. 2.

Webb, N. L. (April 1997). *Research Monograph No. 8: Criteria for alignment of expectations and assessment in mathematics and science education*. Washington DC: Council of Chief State School Officers.

Webb, N. L. (1999). *Research Monograph No. 18: Alignment of science and mathematics standards and assessments in four states*. Washington, DC: Council of Chief State School Officers.

Webb, N. L. (2002). *Alignment Analysis of State F Language Arts Standards and Assessments Grades 5, 8, and 11*. Washington DC: Council of Chief State School Officers.